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 NEWS  3  Apr 09   BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09   ZDB will be removed from STN
 NEWS  5  Apr 19   US Patent Applications available in IFICDB, IFIPAT, and
IFIUDB
 NEWS  6  Apr 22   Records from IP.com available in CAPLUS, HCAPLUS, and
ZCAPLUS
 NEWS  7  Apr 22   BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22   Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03   New e-mail delivery for search results now available
 NEWS 10  Jun 10   MEDLINE Reload
 NEWS 11  Jun 10   PCTFULL has been reloaded
 NEWS 12  Jul 02   FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22   USAN to be reloaded July 28, 2002;
                   saved answer sets no longer valid
 NEWS 14  Jul 29   Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30   NETFIRST to be removed from STN
 NEWS 16  Aug 08   CANCERLIT reload
 NEWS 17  Aug 08   PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08   NTIS has been reloaded and enhanced
 NEWS 19  Aug 19   Aquatic Toxicity Information Retrieval (AQUIRE)
                   now available on STN
 NEWS 20  Aug 19   IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19   The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26   Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03   JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16   Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16   Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 26  Sep 16   CA Section Thesaurus available in CAPLUS and CA
 NEWS 27  Oct 01   CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 28  Oct 21   EVENTLINE has been reloaded
 NEWS 29  Oct 24   BEILSTEIN adds new search fields
 NEWS 30  Oct 24   Nutraceuticals International (NUTRACEUT) now available on
STN
 NEWS 31  Oct 25   MEDLINE SDI run of October 8, 2002
 NEWS 32  Nov 18   DKILIT has been renamed APOLLIT

 NEWS EXPRESS  October 14 CURRENT WINDOWS VERSION IS V6.01,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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=> s vasodilation?
L1 53235 VASODILATION?

=> s l1 and adenosine?
L2 4730 L1 AND ADENOSINE?

=> s l2 and ribose?
L3 27 L2 AND RIBOSE?

=> d l3 abs ibib 1-27

L3 ANSWER 1 OF 27 MEDLINE
AB We recently reported that cADP-**ribose** (cADPR) and ADP-**ribose** (ADPR) play an important role in the regulation of the Ca(2+)-activated K(+) (K(Ca)) channel activity in coronary arterial smooth muscle cells (CASMCs). The present study determined whether these novel signaling nucleotides participate in 11,12-epoxyeicosatrienoic acid (11,12-EET)-induced activation of the K(Ca) channels in CASMCs. HPLC analysis has shown that 11,12-EET increased the production of ADPR but not the formation of cADPR. The increase in ADPR production was due to activation of NAD glycohydrolase as measured by a conversion rate of NAD into ADPR. The maximal conversion rate of NAD into ADPR in coronary homogenate was increased from 2.5 +/- 0.2 to 3.4 +/- 0.3 nmol*(-1) *mg protein(-1) by 11,12-EET. The regioisomers of 8,9-EET, 11,12-EET, and 14,15-EET also significantly increased ADPR production from NAD. Western

blot analysis and immunoprecipitation demonstrated the presence of NAD glycohydrolase, which mediated 11,12-EET-activated production of ADPR. In cell-attached patches, 11,12-EET (100 nM) increases K(Ca) channel activity by 5.6-fold. The NAD glycohydrolase inhibitor cibacron blue 3GA (3GA, 100 microM) significantly attenuated 11,12-EET-induced increase in the K(Ca) channel activity in CASMCs. However, 3GA had no effect on the K(Ca) channels activity in inside-out patches. 11,12-EET produced a concentration-dependent relaxation of precontracted coronary arteries. This 11,12-EET-induced **vasodilation** was substantially attenuated by 3GA (30 microM) with maximal inhibition of 57%. These results indicate that 11,12-EET stimulates the production of ADPR and that intracellular ADPR is an important signaling molecule mediating 11,12-EET-induced activation of the K(Ca) channels in CASMCs and consequently results in **vasodilation** of coronary artery.

ACCESSION NUMBER: 2002176256 MEDLINE
DOCUMENT NUMBER: 21890559 PubMed ID: 11893556
TITLE: Role of ADP-**ribose** in 11,12-EET-induced activation of K(Ca) channels in coronary arterial smooth muscle cells.
AUTHOR: Li Pin-Lan; Zhang David X; Ge Zhi-Dong; Campbell William B
CORPORATE SOURCE: Department of Pharmacology, Medical College of Wisconsin, Milwaukee, Wisconsin 53226, USA.. pli@post.its.mcw.edu
CONTRACT NUMBER: HL-51055 (NHLBI)
HL-57244 (NHLBI)
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY. HEART AND CIRCULATORY PHYSIOLOGY, (2002 Apr) 282 (4) H1229-36.
Journal code: 100901228. ISSN: 0363-6135.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020324
Last Updated on STN: 20020510
Entered Medline: 20020509

L3 ANSWER 2 OF 27 MEDLINE
AB Cyclic **adenosine** diphosphate **ribose** and **adenosine** diphosphate **ribose** (ADPR) play an important role in the regulation of intracellular Ca(2+) release and K(+) channel activity in the coronary arterial smooth muscle. The role of these signaling nucleotides in the control of vascular tone has yet to be determined. The present study was designed to determine whether ADPR produces **vasodilation** in coronary arteries and to explore the mechanism of action of ADPR. ADPR (10-60 micromol/l) was found to produce endothelium-independent relaxation in a concentration-dependent manner in isolated and pressurized small bovine coronary arteries. The ADPR-induced **vasodilation** was substantially attenuated by **adenosine** deaminase (0.2 U/ml), and the P(1) purinoceptor antagonist 8-(p-sulfophenyl)theophylline (50 micromol/l), with maximal inhibitions of 60 and 80%, respectively. When the coronary arterial homogenates were incubated with ADPR, the production of **adenosine** and 5'-AMP was detected. The **adenosine** production was blocked by the 5'-nucleotidase inhibitor, alpha,beta-methylene **adenosine** 5'-diphosphate (MADP, 1 mmol/l), which was accompanied by a corresponding accumulation of 5'-AMP. This 5'-AMP accumulation was substantially inhibited by the apyrase inhibitor sodium azide (10 mmol/l). Moreover, ADPR was hydrolyzed into 5'-AMP by purified apyrase. In agreement with

their inhibitory effect on the **adenosine** production, MADP and sodium azide significantly attenuated the vasodilator response to ADPR. The metabolism of ADPR to **adenosine** was only detected in cultured coronary arterial smooth muscle cells but not in endothelial cells. We concluded that ADPR produces **vasodilation** in small coronary arteries and that the action of ADPR is associated with the **adenosine** production via an apyrase- and 5'-nucleotidase-mediated metabolism.

ACCESSION NUMBER: 2001182421 MEDLINE
DOCUMENT NUMBER: 21093291 PubMed ID: 11173996
TITLE: **Adenosine** diphosphate **ribose** dilates bovine coronary small arteries through apyrase- and 5'-nucleotidase-mediated metabolism.
AUTHOR: Zhang D X; Zou A P; Li P L
CORPORATE SOURCE: Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, WI 53226, USA.
CONTRACT NUMBER: DK54927 (NIDDK)
HL-57244 (NHLBI)
SOURCE: JOURNAL OF VASCULAR RESEARCH, (2001 Jan-Feb) 38 (1) 64-72. Journal code: 9206092. ISSN: 1018-1172.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010329

L3 ANSWER 3 OF 27 MEDLINE

AB Nitric oxide (NO) is implicated in many different biological functions. This is due to its widespread distribution in tissue and to its ability to react with a range of molecules in the organism, of which haemoglobin (Hb), soluble guanylyl cyclase (GC), and superoxide anion are of particular note. In this review we describe the biological pathways of NO and their involvement in its physiological effects and toxicity. This endothelial factor rapidly diffuses into the vascular compartment, and the reaction with the Hb haem group is the main metabolic pathway for endogenous NO. Hb is, therefore, a scavenger for this mediator, which prevents it from reaching the tissue components. NO also reacts with the GC haem group, and this combination is fundamental to its acute vasorelaxing effect. Although molecular oxygen plays a very small part in the oxidization process of NO in biological systems, NO reacts with the superoxide anion to generate peroxynitrite at a rate that is limited only by its diffusion coefficient. This reaction is important in pathological conditions because the peroxynitrite thus formed is a selective oxidant and nitrating agent that interacts with numerous biological molecules, thereby damaging them. In addition, of particular note are the interactions of NO with thiol groups, which may mediate several relevant effects in the organism. NO may also activate endogenous ribosyltransferases, which facilitate the transfer of **adenosine** diphosphate-**ribose** groups from nicotine adenine dinucleotide to the G protein amino acid residues. These last two processes may also be involved in the control of arterial tone and more precisely so when chronic NO production takes place.

ACCESSION NUMBER: 2001095448 MEDLINE

DOCUMENT NUMBER: 20481843 PubMed ID: 11023703
TITLE: Nitric oxide reactivity and mechanisms involved in its biological effects.
AUTHOR: Ortega Mateo A; Amaya Aleixandre de Artinano
CORPORATE SOURCE: Departamento de Farmacologia, Facultad de Medicina, Universidad Complutense de Madrid, Spain.
SOURCE: PHARMACOLOGICAL RESEARCH, (2000 Nov) 42 (5) 421-7. Ref: 63
Journal code: 8907422. ISSN: 1043-6618.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200102
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010201

L3 ANSWER 4 OF 27 MEDLINE
AB cADP-**ribose** (cADPR) induces the release of Ca(2+) from the intracellular stores of coronary artery smooth muscle cells. However, little is known about the role of cADPR-mediated intracellular Ca(2+) release in the control of vascular tone. The present study examined the effects of nicotinamide, a specific inhibitor of ADP-ribosylcyclase, on the vascular tone of bovine coronary arteries. A bovine coronary artery homogenate stimulated the conversion of nicotinamide guanine dinucleotide into cGDP-**ribose**, which is a measure of ADP-ribosylcyclase activity. Nicotinamide significantly inhibited the formation of cGDP-**ribose** in a concentration-dependent manner: at a concentration of 10 mmol/L, it reduced the conversion rate from 3.34+/-0.11 nmol. min(-1). mg(-1) of protein in control cells to 1.42+/-0.11 nmol. min(-1). mg(-1) of protein in treated cells, a 58% reduction. In U46619-precontracted coronary artery rings, nicotinamide produced concentration-dependent relaxation. Complete relaxation with nicotinamide occurred at a dose of 8 mmol/L; the median inhibitory concentration (IC(50)) was 1.7 mmol/L. In the presence of a cell membrane-permeant cADPR antagonist, 8-bromo-cADPR, nicotinamide-induced vasorelaxation was markedly attenuated. Pretreatment of the arterial rings with ryanodine (50 micromol/L) significantly blunted the vasorelaxation response to nicotinamide. However, iloprost- and **adenosine**-induced vasorelaxation was not altered by 8-bromo-cADPR. Moreover, nicotinamide significantly attenuated KCl- or Bay K8644-induced vasoconstriction by 60% and 70%, respectively. These results suggest that the inhibition of cADPR formation by nicotinamide produces vasorelaxation and blunts KCl- and Bay K8644-induced vasoconstriction in coronary arteries and that the cADPR-mediated Ca(2+) signaling pathway plays a role in the control of vascular tone in coronary circulation.
ACCESSION NUMBER: 2000108958 MEDLINE
DOCUMENT NUMBER: 20108958 PubMed ID: 10642331
TITLE: Inhibition of cADP-**ribose** formation produces **vasodilation** in bovine coronary arteries.
AUTHOR: Geiger J; Zou A P; Campbell W B; Li P L
CORPORATE SOURCE: Departments of Pharmacology and Toxicology and Physiology, Medical College of Wisconsin, Milwaukee 53226, USA.
CONTRACT NUMBER: HL-51055 (NHLBI)
HL-57244 (NHLBI)

SOURCE: HYPERTENSION, (2000 Jan) 35 (1 Pt 2) 397-402.
Journal code: 7906255. ISSN: 0194-911X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000218
Last Updated on STN: 20000218
Entered Medline: 20000207

L3 ANSWER 5 OF 27 MEDLINE

AB Endotoxin (Etx) causes excessive activation of the nuclear repair enzyme poly(ADP-**ribose**) synthase (PARS), which depletes cellular energy stores and leads to vascular dysfunction. We hypothesized that PARS inhibition would attenuate injury to mechanisms of pulmonary vasorelaxation in acute lung injury. The purpose of this study was to determine the effect of in vivo PARS inhibition on Etx-induced dysfunction of pulmonary vasorelaxation. Rats received intraperitoneal saline or Etx (Salmonella typhimurium; 20 mg/kg) and one of the PARS inhibitors, 3-aminobenzamide (3-AB; 10 mg/kg) or nicotinamide (Nic; 200 mg/kg), 90 min later. After 6 h, concentration-response curves were determined in isolated pulmonary arterial rings. Etx impaired endothelium-dependent (response to ACh and calcium ionophore) and -independent (sodium nitroprusside) cGMP-mediated vasorelaxation. 3-AB and Nic attenuated Etx-induced impairment of endothelium-dependent and -independent pulmonary vasorelaxation. 3-AB and Nic had no effect on Etx-induced increases in lung myeloperoxidase activity and edema. Lung ATP decreased after Etx but was maintained by 3-AB and Nic. Pulmonary arterial PARS activity increased fivefold after Etx, which 3-AB and Nic prevented. The beneficial effects were not observed with benzoic acid, a structural analog of 3-AB that does not inhibit PARS. Our results suggest that PARS inhibition with 3-AB or Nic improves pulmonary vasorelaxation and preserves lung ATP levels in acute lung injury.

ACCESSION NUMBER: 1999447287 MEDLINE
DOCUMENT NUMBER: 99447287 PubMed ID: 10516218
TITLE: Inhibition of PARS attenuates endotoxin-induced dysfunction of pulmonary vasorelaxation.
AUTHOR: Pulido E J; Shames B D; Selzman C H; Barton H A; Banerjee A; Bensard D D; McIntyre R C Jr
CORPORATE SOURCE: Department of Surgery, University of Colorado Health Sciences Center and Veterans Affairs Hospital, Denver 80262, Colorado.
CONTRACT NUMBER: GM-49222 (NIGMS)
HD-36256-01 (NICHD)
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY, (1999 Oct) 277 (4 Pt 1) L769-76.
Journal code: 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111

Last Updated on STN: 20000111
Entered Medline: 19991122

L3 ANSWER 6 OF 27 MEDLINE
AB We examined whether human cardiac tissue contains diadenosine polyphosphates and investigated their physiological role. Extracts from human cardiac tissue from transplant recipients were fractionated by size exclusion-, affinity-, anion exchange- and reversed-phase chromatography. MALDI-MS analysis of two absorbing fractions revealed molecular masses of 676.2 Da and 756.0 Da. The UV spectra of both fractions were identical to that of **adenosine**. Postsource decay MALDI mass spectrometry indicated that the molecules with a mass of 676.2 Da and 757.0 Da contained AMP and ATP, respectively. As shown by enzymatic cleavage, both molecules consist of two **adenosines** interconnected by either two or three phosphates in 5'-positions of the **riboses**. Two substances can be identified as 5',5"'-P1,P2-diphosphate (Ap2A) and 5',5"'-P1, P3-triphosphate (Ap3A). Ap2A and Ap3A, together with ATP and ADP, are stored in myocardial-specific granules in biologically active concentrations. In the isolated perfused rat heart, Ap2A and Ap3A caused dose-dependent coronary **vasodilations**. In myocardial preparations, Ap2A and Ap3A attenuated the effect of isoproterenol, exerting a negative inotropic effect. The calcium current of guinea pig ventricular myocytes, stimulated by isoproterenol, was also attenuated by Ap2A and Ap3A. The presence of Ap2A and Ap3A in cardiac-specific granules and the actions of these substances on the myocardium and coronary vessels indicate a role for these substances as endogenous modulators of myocardial functions and coronary perfusion.
ACCESSION NUMBER: 1999196951 MEDLINE
DOCUMENT NUMBER: 99196951 PubMed ID: 10094930
TITLE: Identification and characterization of diadenosine 5',5"'-P1,P2 -diphosphate and diadenosine 5',5"'-P1,P3-triphosphate in human myocardial tissue.
AUTHOR: Luo J; Jankowski J; Knobloch M; Van der Giet M; Gardanis K; Russ T; Vahlensieck U; Neumann J; Schmitz W; Tepel M; Deng M C; Zidek W; Schluter H
CORPORATE SOURCE: Medizinische Klinik I, Universitatsklinik Marienhospital der Ruhr-Universitat Bochum, Germany.
SOURCE: FASEB JOURNAL, (1999 Apr) 13 (6) 695-705.
Journal code: 8804484. ISSN: 0892-6638.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990504
Last Updated on STN: 20000303
Entered Medline: 19990419

L3 ANSWER 7 OF 27 MEDLINE
AB **Adenosine** consists of one **ribose** and one purine moiety and binds to specific receptors on cell membranes. The receptors are coupled to G-proteins and additionally to various effector-systems. When a mismatch occurs between energy supply and energy demand, **adenosine** is produced by the catabolism of **adenosine** triphosphate. The metabolism of an organ is thereby coupled to the local blood supply (metabolic **vasodilation**). In addition to **vasodilation**, **adenosine** has several electrophysiological, cardioprotective,

metabolic, and antiinflammatory properties. **Adenosine** is rapidly metabolized in blood and interstitial fluid, through cell absorption and degradation by **adenosine** deaminase. The short half-life of **adenosine** limits its clinical value. However, there are several ways of increasing the interstitial concentration of **adenosine**. At present, **adenosine** or **adenosine**-potentiating substances are used clinically to terminate supraventricular tachycardias, to induce myocardial ischemia in patients who are unable to exercise, and to reduce myocardial ischemia or reperfusion injury. Caffeine and other methylxanthines are **adenosine** receptor antagonists, and several of the pharmacodynamic properties of these substances are caused by **adenosine** receptor antagonism.

ACCESSION NUMBER: 1998261878 MEDLINE
DOCUMENT NUMBER: 98261878 PubMed ID: 9599504
TITLE: [Receptor mediated effects of **adenosine** and caffeine].
Reseptormedierte effekter av adenosin og koffein.
AUTHOR: Eikvar L; Kirkeboen K A
CORPORATE SOURCE: Klinisk kjemisk avdeling, Rikshospitalet, Oslo.
SOURCE: TIDSSKRIFT FOR DEN NORSKE LAEGEFORENING, (1998 Mar 30) 118 (9) 1390-5. Ref: 74
Journal code: 0413423. ISSN: 0029-2001.
PUB. COUNTRY: Norway
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: Norwegian
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980618
Last Updated on STN: 19980618
Entered Medline: 19980608

L3 ANSWER 8 OF 27 MEDLINE

AB Nitric oxide stimulates endogenous ADP-ribosylation of cytosolic and membrane-bound proteins. Endogenous ADP-ribosyltransferases modify several intracellular proteins including the heterotrimeric GTP-binding proteins (G proteins). ADP-ribosylation of G proteins in vascular smooth muscle leads to increased activation of adenylate cyclase and decreased activation of phospholipase C leading to **vasodilation**. We hypothesize that in hypertension, chronically depressed endothelium-derived nitric oxide levels lead to decreased ADP-ribosylation of G proteins. This reduced ADP-ribosylation leads to vasoconstriction since activation of the G proteins by agonists is unopposed. Thus, disinhibition of G proteins, mediated by nitric oxide deficit, is responsible for the observed increased sensitivity to vasoconstrictor agonists in hypertension. This novel role for nitric oxide in hypertension will provide a new area of research for antihypertensive therapeutic intervention.

ACCESSION NUMBER: 95333953 MEDLINE
DOCUMENT NUMBER: 95333953 PubMed ID: 7609667
TITLE: Nitric oxide regulation of ADP-ribosylation of G proteins in hypertension.
AUTHOR: Kanagy N L; Charpie J R; Webb R C
CORPORATE SOURCE: University of Michigan Medical School, Ann Arbor 48109-0622, USA.

CONTRACT NUMBER: HL 18575 (NHLBI)
SOURCE: MEDICAL HYPOTHESES, (1995 Mar) 44 (3) 159-64. Ref: 39
Journal code: 7505668. ISSN: 0306-9877.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950828
Last Updated on STN: 20000303
Entered Medline: 19950811

L3 ANSWER 9 OF 27 MEDLINE
AB 1. The pharmacological actions of the purine nucleotides beta-nicotinamide adenine dinucleotide (NAD), beta-nicotinamide adenine dinucleotide phosphate (beta-NADP), **adenosine** 5'-diphosphoribose (ADP-**ribose**), the vitamin nicotinamide and structural analogues of NAD and NADP were tested in the isolated perfused mesenteric arterial bed of the rat. Prejunctional effects of NAD were tested against sympathetic vasoconstriction at basal tone, and against sensory-motor vasodilatation at raised tone. 2. NAD and NADP had no vasoconstrictor action but were weak vasodilators of the raised-tone mesenteric arterial bed. A rank order of vasodilator potency of ADP >> ADP-**ribose** >> NADP > or = NAD = **adenosine** was observed. The P1-purinoceptor antagonist, 8-para-sulphophenyltheophylline (8-pST; 3 microM) inhibited vasodilator responses to NAD (pKB of 6.61 +/- 0.21, n = 7) and **adenosine** (pKB of 5.78 +/- 0.14, n = 6), but not those elicited by NADP, ADP and ADP-**ribose**. Nicotinamide, and analogues of NAD and NADP, namely nicotinamide-1,N6-ethenoadenine dinucleotide phosphate, beta-nicotinamide mononucleotide, nicotinamide hypoxanthine dinucleotide phosphate, nicotinamide hypoxanthine dinucleotide, nicotinamide guanine dinucleotide, and nicotinamide-1, N6-ethenoadenine dinucleotide had no vasoconstrictor or vasodilator actions (at doses of up to 50 nmol). 3. At basal tone, electrical field stimulation (EFS) (32 Hz, 1ms, 90 V, 5 s) at 2 min intervals elicited reproducible vasoconstrictor responses due to activation of sympathetic nerves. NAD and **adenosine** (10-100 microM) inhibited these responses in a concentration-dependent manner with similar potencies. Nicotinamide had no effect on sympathetic vasoconstriction at concentrations of up to 0.1 mM. (ABSTRACT TRUNCATED AT 250 WORDS)
ACCESSION NUMBER: 95323273 MEDLINE
DOCUMENT NUMBER: 95323273 PubMed ID: 7599921
TITLE: Modulation by nicotinamide adenine dinucleotide of sympathetic and sensory-motor neurotransmission via P1-purinoceptors in the rat mesenteric arterial bed.
AUTHOR: Ralevic V
CORPORATE SOURCE: Department of Anatomy and Developmental Biology, University College London.
SOURCE: BRITISH JOURNAL OF PHARMACOLOGY, (1995 Apr) 114 (8) 1541-8.
Journal code: 7502536. ISSN: 0007-1188.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950822
Last Updated on STN: 19950822
Entered Medline: 19950808

L3 ANSWER 10 OF 27 MEDLINE
AB The inhibitory nucleotide-regulatory protein (Gl) has been shown to lose its adenylate cyclase inhibitory effect upon treatment with pertussis toxin. To find out whether a pertussis sensitive mechanism is involved in the regulation of the cGMP-system, bovine mesenteric arteries were incubated in buffer containing pertussis toxin, and the relaxation and intracellular cGMP accumulation induced by different groups of vasodilating agents were studied. The present results show a pertussis toxin induced decrease in relaxation as well as a decrease in the cGMP-elevation induced by the endothelium dependent vasodilators acetylcholine and calcium ionophore A 23187. Arteries treated with atrial natriuretic peptide showed no alterations in relaxation or cGMP content after incubation with pertussis toxin. A 40 kD soluble ribosylation substrate for pertussis toxin was identified in bovine mesenteric artery. These results suggest that a pertussis toxin sensitive mechanism is involved in the vasodilating mechanism of acetylcholine and calcium ionophore A 23187, while no evidence for such a mechanism could be found regarding the vasodilatory action of atrial natriuretic peptide.
ACCESSION NUMBER: 90173687 MEDLINE
DOCUMENT NUMBER: 90173687 PubMed ID: 2155364
TITLE: Effects of pertussis toxin on **vasodilation** and cyclic GMP in bovine mesenteric arteries and demonstration of a 40 kD soluble protein ribosylation substrate for pertussis toxin.
AUTHOR: Ljusegren M E; Axelsson K L; Ahlner J; Karlsson J O; Andersson R G; Magnusson B R; Friedman R L
CORPORATE SOURCE: Department of Biology, Linkoping University, Sweden.
SOURCE: LIFE SCIENCES, (1990) 46 (8) 543-52.
Journal code: 0375521. ISSN: 0024-3205.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199004
ENTRY DATE: Entered STN: 19900601
Last Updated on STN: 19900601
Entered Medline: 19900406

L3 ANSWER 11 OF 27 MEDLINE
AB **Adenosine** and 5'-chloro-5'-deoxyadenosine inhibited the phosphorylation of phosphatidylinositol in membranes prepared from aortic smooth muscle. The nucleosides did not affect the breakdown of phosphatidylinositol-4-phosphate. Under certain conditions, the membrane-bound phosphatidylinositol kinase phosphorylated exogenous phosphatidylinositol. The nucleosides inhibited the enzyme competitively with respect to magnesium-ATP and non-competitively with respect to phosphatidylinositol. **Adenosine** analogs modified in the **ribose** moiety were inhibitors with potencies comparable to that of **adenosine**, whereas adenine nucleotides and purine-modified **adenosine** analogs were much weaker inhibitors. Density gradient fractionation studies showed that phosphatidylinositol kinase is primarily
associated with the sarcoplasmic reticulum. Vascular smooth muscle

contraction is associated with increased phosphatidylinositol turnover. Inhibition of phosphatidylinositol kinase by intracellular **adenosine** may, therefore, be a factor involved in regulating **vasodilation**.

ACCESSION NUMBER: 87270810 MEDLINE
DOCUMENT NUMBER: 87270810 PubMed ID: 3038119
TITLE: Inhibition of phosphatidylinositol kinase in vascular smooth muscle membranes by **adenosine** and related compounds.
AUTHOR: Doctrow S R; Lowenstein J M
CONTRACT NUMBER: GM07261 (NIGMS)
T32 GM07596 (NIGMS)
SOURCE: BIOCHEMICAL PHARMACOLOGY, (1987 Jul 15) 36 (14) 2255-62.
Journal code: 0101032. ISSN: 0006-2952.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198708
ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 19980206
Entered Medline: 19870819

L3 ANSWER 12 OF 27 MEDLINE
AB A number of natural physiological agents deserve evaluation in the treatment of acute myocardial infarction. Prostacyclin and magnesium dilate large coronary arteries and could promote collateral circulation to ischemic regions, especially if used in conjunction with alpha-agonists to prevent a drop in coronary perfusion pressure. In addition, prostacyclin has anti-aggregatory and de-aggregatory effects on platelets and a stabilizing action on hypoxic tissue, while magnesium has anti-arrhythmic, potassium-retaining, and fibrinolytic effects, all of which could improve the outcome in acute MI. **Adenosine** or **ribose** infusion could be used to promote rapid repletion of adenine nucleotides in reperfused tissue, but unfortunately arteriolar **vasodilation** by **adenosine** might reduce collateral perfusion by "coronary steal". High-dose insulin has positive-inotropic (at minimal oxygen cost) and potent anti-arrhythmic actions that have not been adequately tested in previous clinical trials of "polarizing solutions". Carnitine infusion could improve the bioenergetics of ischemic myocardium by relieving inhibition of mitochondrial adenine nucleotide translocase.

ACCESSION NUMBER: 84039052 MEDLINE
DOCUMENT NUMBER: 84039052 PubMed ID: 6415374
TITLE: Management of acute myocardial infarction with natural physiological agents.
AUTHOR: McCarty M F
SOURCE: MEDICAL HYPOTHESES, (1983 Aug) 11 (4) 449-65. Ref: 98
Journal code: 7505668. ISSN: 0306-9877.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198312
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19831220

L3 ANSWER 13 OF 27 MEDLINE

AB Intracoronary **adenosine** infusions in conscious dogs produced half-maximal coronary **vasodilation** at 0.57 +/- 0.18 (SD) microns and at 1.01 +/- 0.25 microns in open-chest dogs. In both preparations, **adenosine** at concentrations in the range found in cardiac muscle by direct analysis produced coronary **vasodilation** equal to that attained during a maximum reactive hyperemic response. The quantitative structure-activity relationship technique was applied to data on the coronary vasoactivity of 68 **adenosine** analogs to identify the chemical features of this molecule that determine its vasoactivity. These are: (1) the size of the purine base; (2) the inductive effect of C-2 substituent; (3) the electron-withdrawing effect of the C-6 substituent; (4) the glycosylic torsion angle; (5) the ability of the C-2' and C-3' hydroxyls to participate in hydrogen bonding; (7) the absence of sterically hindering groups in the vicinity of C-2' and, more importantly, C-3'; and (8) the inductive effect of the C-5' substituent. The hydrophobicity of these analogs did not correlate with vasoactivity, suggesting that the hydrophilicity of the **ribose** moiety overshadows any hydrophobic influence of the very weakly aromatic purine base.

ACCESSION NUMBER: 80002080 MEDLINE
DOCUMENT NUMBER: 80002080 PubMed ID: 476869
TITLE: Coronary vasoactivity of **adenosine** in the conscious dog.
AUTHOR: Olsson R A; Khouri E M; Bedynek J L Jr; McLean J
SOURCE: CIRCULATION RESEARCH, (1979 Oct) 45 (4) 468-78. Journal code: 0047103. ISSN: 0009-7330.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197911
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19791121

L3 ANSWER 14 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Cyclic **adenosine** diphosphate **ribose** and **adenosine** diphosphate **ribose** (ADPR) play an important role in the regulation of intracellular Ca2+ release and K+ channel activity in the coronary arterial smooth muscle. The role of these signaling nucleotides in the control of vascular tone has yet to be determined. The present study was designed to determine whether ADPR produces **vasodilation** in coronary arteries and to explore the mechanism of action of ADPR. ADPR (10-60 mumol/l) was found to produce endothelium-independent relaxation in a concentration-dependent manner in isolated and pressurized small bovine coronary arteries. The ADPR-induced **vasodilation** was substantially attenuated by **adenosine** deaminase (0.2 U/ml), and the P1 purinoceptor antagonist 8-(p-sulfophenyl)theophylline (50 mumol/l), with maximal inhibitions of 60 and 80%, respectively. When the coronary arterial homogenates were incubated with ADPR, the production of **adenosine** and 5'-AMP was detected. The **adenosine** production was blocked by the 5'-nucleotidase inhibitor, alpha,beta-methylene **adenosine** 5'-diphosphate (MADP,, 1 mmol/l), which was accompanied by a corresponding accumulation of 5'-AMP. This 5'-AMP accumulation was substantially inhibited by the apyrase inhibitor sodium azide (10 mmol/l). Moreover,

ADPR was hydrolyzed into 5'-AMP by purified apyrase. In agreement with their inhibitory effect on the **adenosine** production, MADP and sodium azide significantly attenuated the vasodilator response to ADPR. The metabolism of ADPR to **adenosine** was only detected in cultured coronary arterial smooth muscle cells but not in endothelial cells. We concluded that ADPR produces **vasodilation** in small coronary arteries and that the action of ADPR is associated with the **adenosine** production via an apyrase- and 5'-nucleotidase-mediated metabolism.

ACCESSION NUMBER: 2001:149402 BIOSIS
DOCUMENT NUMBER: PREV200100149402
TITLE: **Adenosine** diphosphate **ribose** dilates bovine coronary small arteries through apyrase- and 5'-nucleotidase-mediated metabolism.
AUTHOR(S): Zhang, David X.; Zou, Ai-Ping; Li, Pin-Lan (1)
CORPORATE SOURCE: (1) Department of Pharmacology and Toxicology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI, 53226: pli@mcw.edu USA
SOURCE: Journal of Vascular Research, (January February, 2001) Vol. 38, No. 1, pp. 64-72. print.
ISSN: 1018-1172.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L3 ANSWER 15 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB cADP-**ribose** (cADPR) induces the release of Ca2+ from the intracellular stores of coronary artery smooth muscle cells. However, little is known about the role of cADPR-mediated intracellular Ca2+ release in the control of vascular tone. The present study examined the effects of nicotinamide, a specific inhibitor of ADP-ribosylcyclase, on the vascular tone of bovine coronary arteries. A bovine coronary artery homogenate stimulated the conversion of nicotinamide guanine dinucleotide into cGDP-**ribose**, which is a measure of ADP-ribosylcyclase activity. Nicotinamide significantly inhibited the formation of cGDP-**ribose** in a concentration-dependent manner: at a concentration of 10 mmol/L, it reduced the conversion rate from 3.34+-0.11 nmol cntdot min-1 cntdot mg-1 of protein in control cells to 1.42+-0.11 nmol cntdot min-1 cntdot mg-1 of protein in treated cells, a 58% reduction. In U46619-precontracted coronary artery rings, nicotinamide produced concentration-dependent relaxation. Complete relaxation with nicotinamide occurred at a dose of 8 mmol/L; the median inhibitory concentration (IC50) was 1.7 mmol/L. In the presence of a cell membrane-permeant cADPR antagonist, 8-bromo-cADPR, nicotinamide-induced vasorelaxation was markedly attenuated. Pretreatment of the arterial rings with ryanodine (50 mumol/L) significantly blunted the vasorelaxation response to nicotinamide. However, iloprost- and **adenosine**-induced vasorelaxation was not altered by 8-bromo-cADPR. Moreover, nicotinamide significantly attenuated KCl- or Bay K8644-induced vasoconstriction by 60% and 70%, respectively. These results suggest that the inhibition of cADPR formation by nicotinamide produces vasorelaxation and blunts KCl- and Bay K8644-induced vasoconstriction in coronary arteries and that the cADPR-mediated Ca2+ signaling pathway plays a role in the control of vascular tone in coronary circulation.
ACCESSION NUMBER: 2000:121671 BIOSIS

DOCUMENT NUMBER: PREV200000121671
TITLE: Inhibition of cADP-**ribose** formation produces **vasodilation** in bovine coronary arteries.
AUTHOR(S): Geiger, Jason; Zou, Ai-Ping; Campbell, William B.; Li, Pin-Lan (1)
CORPORATE SOURCE: (1) Department of Pharmacology and Toxicology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI, 53226 USA
SOURCE: Hypertension (Baltimore), (Jan., 2000) Vol. 35, No. 1 Part 2, pp. 397-402.
ISSN: 0194-911X.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L3 ANSWER 16 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB We examined whether human cardiac tissue contains diadenosine polyphosphates and investigated their physiological role. Extracts from human cardiac tissue from transplant recipients were fractionated by size exclusion-, affinity-, anion exchange- and reversed-phase chromatography. MALDI-MS analysis of two absorbing fractions revealed molecular masses of 676.2 Da and 756.0 Da. The UV spectra of both fractions were identical to that of **adenosine**. Postsource decay MALDI mass spectrometry indicated that the molecules with a mass of 676.2 Da and 757.0 Da contained AMP and ATP, respectively. As shown by enzymatic cleavage, both molecules consist of two **adenosines** interconnected by either two or three phosphates in 5'-positions of the **riboses**. Two substances can be identified as 5',5'''-P1,P2-diphosphate (Ap2A) and 5',5'''-P1,P3-triphosphate (Ap3A). Ap2A and Ap3A, together with ATP and ADP, are stored in myocardial-specific granules in biologically active concentrations. In the isolated perfused rat heart, Ap2A and Ap3A caused dose-dependent coronary **vasodilations**. In myocardial preparations, Ap2A and Ap3A attenuated the effect of isoproterenol, exerting a negative inotropic effect. The calcium current of guinea pig ventricular myocytes, stimulated by isoproterenol, was also attenuated by Ap2A and Ap3A. The presence of Ap2A and Ap3A in cardiac-specific granules and the actions of these substances on the myocardium and coronary vessels indicate a role for these substances as endogenous modulators of myocardial functions and coronary perfusion.
ACCESSION NUMBER: 1999:215861 BIOSIS
DOCUMENT NUMBER: PREV199900215861
TITLE: Identification and characterization of diadenosine 5',5'''-P1,P2-diphosphate and diadenosine 5',5'''-P1,P3-triphosphate in human myocardial tissue.
AUTHOR(S): Luo, J.; Jankowski, J.; Knobloch, M.; van der Giet, M.; Gardanis, K.; Russ, T.; Vahlensieck, U.; Neumann, J.; Schmitz, W.; Tepel, M.; Deng, M. C.; Zidek, W.; Schlueter, H. (1)
CORPORATE SOURCE: (1) Medizinische Klinik I, Universitaetsklinik Marienhospital der Ruhr-Universitaet Bochum, Hoelkeskampring 40, D-44625, Herne Germany
SOURCE: FASEB Journal, (April, 1999) Vol. 13, No. 6, pp. 695-705.
ISSN: 0892-6638.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L3 ANSWER 17 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB **Adenosine** consists of one **ribose** and one purine moiety and binds to specific receptors on cell membranes. The receptors are coupled to G-proteins and additionally to various effector-systems. When a mismatch occurs between energy supply and energy demand, **adenosine** is produced by the catabolism of **adenosine** triphosphate. The metabolism of an organ is thereby coupled to the local blood supply (metabolic **vasodilation**). In addition to **vasodilation**, **adenosine** has several electrophysiological, cardioprotective, metabolic, and antiinflammatory properties. **Adenosine** is rapidly metabolized in blood and interstitial fluid, through cell absorption and degradation by **adenosine** deaminase. The short half-life of **adenosine** limits its clinical value. However, there are several ways of increasing the interstitial concentration of **adenosine**. At present, **adenosine** or **adenosine**-potentiating substances are used clinically to terminate supraventricular tachycardias, to induce myocardial ischemia in patients who are unable to exercise, and to reduce myocardial ischemia or reperfusion injury. Caffeine and other methylxanthines are **adenosine** receptor antagonists, and several of the pharmacodynamic properties of these substances are caused by **adenosine** receptor antagonism.

ACCESSION NUMBER: 1998:224525 BIOSIS
DOCUMENT NUMBER: PREV199800224525
TITLE: Receptor mediated effects of **adenosine** and caffeine.
AUTHOR(S): Eikvar, Lars; Kirkeboen, Knut Arvid
CORPORATE SOURCE: Klinisk Kjemisk Avdeling, Oslo Sanitetsforenings Revmatismesykehus, Rikshospitalet, 0027 Oslo Norway
SOURCE: Tidsskrift for den Norske Laegeforening, (March 30, 1998) Vol. 118, No. 9, pp. 1390-1395. ISSN: 0029-2001.
DOCUMENT TYPE: General Review
LANGUAGE: Norwegian
SUMMARY LANGUAGE: Norwegian; English

L3 ANSWER 18 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Substituting a methyl group for the **ribose** moiety of N-6-substituted **adenosines** that are selective agonists at the **adenosine** A-1 receptor creates antagonists that are A-1-selective. Inasmuch as 2-phenylethoxyadenosine is a selective agonist for the **adenosine** A-2 receptor, 2-phenylethoxy-9-methyl-adenine (PEMA) was synthesized and tested as a potential **adenosine** A-2 receptor antagonist. In guinea pig hearts, PEMA antagonized with the same potency (pK-B apprx 6.1) the A-1-mediated negative dromotropic and inotropic actions and the A-2-mediated coronary vasoactivity of the nonselective **adenosine** receptor agonist 5'-N-ethylcarboxamidoadenosine (NECA). PEMA at concentrations up to 30 mu-M did not antagonize the NECA-induced relaxations in guinea pig aortic rings. At concentrations exceeding 10 mu-M, PEMA caused xanthine-insensitive relaxations of both the aorta and the coronary vessels. Pharmacological resultant analysis revealed A-2 receptor antagonism by PEMA in the guinea pig aorta (pK-B = 5.2). The nonselective **adenosine** receptor antagonist 8-p-sulfophenyl-theophylline antagonized NECA responses in all four assays with equal potency (pK-B apprx 5.7). Thus, PEMA does not discriminate between A-2 receptors in the coronary vessels and A-1 receptors in the atria of the guinea pig, but it is 10-fold more potent at antagonizing the A-2 receptor in coronaries than the A-2 receptors in the aorta. The data suggest that

the A-2 receptors in the coronary vasculature may be of the A-2a subtype, whereas those in the aorta may be of the A-2b subtype.

ACCESSION NUMBER: 1993:302422 BIOSIS
DOCUMENT NUMBER: PREV199396020647
TITLE: 2-Phenylethoxy-9-methyladenine: An **adenosine** receptor antagonist that discriminates between A-2 **adenosine** receptors in the aorta and the coronary vessels from the guinea pig.
AUTHOR(S): Martin, Pauline L. (1); Ueeda, Masayuki; Olsson, Ray A.
CORPORATE SOURCE: (1) Dep. Pharmacology, Whitby Res., Inc., 2801 Reserve St.,
Richmond, VA 23220
SOURCE: Journal of Pharmacology and Experimental Therapeutics, (1993) Vol. 265, No. 1, pp. 248-253.
ISSN: 0022-3565.
DOCUMENT TYPE: Article
LANGUAGE: English

L3 ANSWER 19 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Adenosine** and 5'-chloro-5'-deoxyadenosine inhibited the phosphorylation of phosphatidylinositol in membranes prepared from aortic smooth muscle. The nucleosides did not affect the breakdown of phosphatidylinositol-4-phosphate. Under certain conditions, the membrane-bound phosphatidylinositol kinase phosphorylated exogenous phosphatidylinositol. The nucleosides inhibited the enzyme competitively with respect to magnesium-ATP and non-competitively with respect to phosphatidylinositol. **Adenosine** analogs modified in the **ribose** moiety were inhibitors with potencies comparable to that of **adenosine**, whereas adenine nucleotides and purine-modified **adenosine** analogs were much weaker inhibitors. Density gradient fraction studies showed the phosphatidylinositol kinase is primarily associated with the sarcoplasmic reticulum. Vascular smooth muscle contraction is associated with increased phosphatidylinositol turnover. Inhibition of phosphatidylinositol kinase by intracellular **adenosine** may, therefore, be a factor involved in regulating **vasodilation**.

ACCESSION NUMBER: 1987:418054 BIOSIS
DOCUMENT NUMBER: BA84:84716
TITLE: INHIBITION OF PHOSPHATIDYLINOSITOL KINASE IN VASCULAR SMOOTH MUSCLE MEMBRANES BY **ADENOSINE** AND RELATED COMPOUNDS.
AUTHOR(S): DOCTROW S R; LOWENSTEIN J M
CORPORATE SOURCE: GRADUATE DEP. BIOCHEMISTRY, BRANDEIS UNIV., WALTHAM, MASS. 02254.
SOURCE: BIOCHEM PHARMACOL, (1987) 36 (14), 2255-2262.
CODEN: BCPCA6. ISSN: 0006-2952.
FILE SEGMENT: BA; OLD
LANGUAGE: English

L3 ANSWER 20 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Intracoronary **adenosine** infusions in conscious dogs produced half-maximal coronary **vasodilation** at 0.57 .+-. 0.18 (SD) .mu.M and at 1.01 .+-. 0.25 .mu.M in open-chest dogs. In both preparations, **adenosine** at concentrations in the range found in cardiac muscle by direct analysis produced coronary **vasodilation** equal to that attained during a maximum reactive hyperemic response. The quantitative structure-activity relationship technique was applied to data on the coronary vasoactivity of 68 **adenosine** analogs to identify the chemical features of this molecule that determine its vasoactivity. These are: the size of the purine base; the inductive effect of the C-2

substituent; the electron-withdrawing effect of the C-6 substituent; the glycosylic torsion angle; the ability of the C-2' and C-3' hydroxyls to participate in H bonding; the absence of sterically hindering groups in the vicinity of C-2' and, more importantly, C-3'; and the inductive effect of the C-5' substituent. The hydrophobicity of these analogs did not correlate with vasoactivity, suggesting that the hydrophilicity of the **ribose** moiety overshadows any hydrophobic influence of the very weakly aromatic purine base.

ACCESSION NUMBER: 1980:157402 BIOSIS
DOCUMENT NUMBER: BA69:32398
TITLE: CORONARY VASOACTIVITY OF **ADENOSINE** IN THE CONSCIOUS DOG.
AUTHOR(S): OLSSON R A; KHOURI E M; BEDYNEK J L JR; MCLEAN J
CORPORATE SOURCE: DEP. INTERN. MED., UNIV. S. FLA. COLL. MED., 12901 N. 30TH ST., TAMPA, FLA. 33612, USA.
SOURCE: CIRC RES, (1979) 45 (4), 468-478.
CODEN: CIRUAL. ISSN: 0009-7330.
FILE SEGMENT: BA; OLD
LANGUAGE: English

L3 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB Cyclic ADP **ribose** and ADP **ribose** (ADPR) play an important role in the regulation of intracellular Ca2+ release and K+ channel activity in the coronary arterial smooth muscle. The role of these signaling nucleotides in the control of vascular tone has yet to be detd. The present study was designed to det. whether ADPR produces **vasodilation** in coronary arteries and to explore the mechanism of action of ADPR. ADPR (10-60 .mu.mol/L) was found to produce endothelium-independent relaxation in a concn.-dependent manner in isolated and pressurized small bovine coronary arteries. The ADPR-induced **vasodilation** was substantially attenuated by **adenosine** deaminase (0.2 U/mL), and the P1 purinoceptor antagonist 8-(p-sulfophenyl)theophylline (50 .mu.mol/l), with maximal inhibitions of 60 and 80%, resp. When the coronary arterial homogenates were incubated with ADPR, the prodn. of **adenosine** and 5'-AMP was detected. The **adenosine** prodn. was blocked by the 5'-nucleotidase inhibitor, .alpha.,.beta.-methylene ADP (MADP, 1 mmol/L), which was accompanied by a corresponding accumulation of 5'-AMP. This 5'-AMP accumulation was substantially inhibited by the apyrase inhibitor sodium azide (10 mmol/l). Moreover, ADPR was hydrolyzed into 5'-AMP by purified apyrase. In agreement with their inhibitory effect on the **adenosine** prodn., MADP and sodium azide significantly attenuated the vasodilator response to ADPR. The metab. of ADPR to **adenosine** was only detected in cultured coronary arterial smooth muscle cells but not in endothelial cells. We concluded that ADPR produces **vasodilation** in small coronary arteries and that the action of ADPR is assocd. with the **adenosine** prodn. via an apyrase- and 5'-nucleotidase-mediated metab.

ACCESSION NUMBER: 2001:175337 CAPLUS
DOCUMENT NUMBER: 134:324008
TITLE: **Adenosine** diphosphate **ribose** dilates bovine coronary small arteries through apyrase- and 5'-nucleotidase-mediated metabolism
AUTHOR(S): Zhang, David X.; Zou, Ai-Ping; Li, Pin-Lan
CORPORATE SOURCE: Departments of Pharmacology and Toxicology and Physiology, Medical College of Wisconsin, Milwaukee,

WI, USA
SOURCE: Journal of Vascular Research (2001), 38(1), 64-72
CODEN: JVREE9; ISSN: 1018-1172
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L3 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB CADP-**ribose** (cADPR) induces the release of Ca2+ from the intracellular stores of coronary artery smooth muscle cells. However, little is known about the role of cADPR-mediated intracellular Ca2+ release in the control of vascular tone. The present study examd. the effects of nicotinamide, a specific inhibitor of ADP-ribosylcyclase, on the vascular tone of bovine coronary arteries. A bovine coronary artery homogenate stimulated the conversion of nicotinamide guanine dinucleotide into cGDP-**ribose**, which is a measure of ADP-ribosylcyclase activity. Nicotinamide significantly inhibited the formation of cGDP-**ribose** in a concn.-dependent manner: at a concn. of 10 mmol/L, it reduced the conversion rate from 3.34 nmol .cntdot. min-1 .cntdot. mg-1 of protein in control cells to 1.42 nmol .cntdot. min-1 .cntdot. mg-1 of protein in treated cells, a 58% redn. In U46619-precontracted coronary artery rings, nicotinamide produced concn.-dependent relaxation. Complete relaxation with nicotinamide occurred at a dose of 8 mmol/L; the median inhibitory concn. (IC50) was 1.7 mmol/L. In the presence of a cell membrane-permeant cADPR antagonist, 8-bromo-cADPR, nicotinamide-induced vasorelaxation was markedly attenuated. Pretreatment of the arterial rings with ryanodine (50 .mu.mol/L) significantly blunted the vasorelaxation response to nicotinamide. However, iloprost- and **adenosine**-induced vasorelaxation was not altered by 8-bromo-cADPR. Moreover, nicotinamide significantly attenuated KCl- or Bay K8644-induced vasoconstriction by 60% and 70%, resp. These results suggest that the inhibition of cADPR formation by nicotinamide produces vasorelaxation and blunts KCl- and Bay K8644-induced vasoconstriction in coronary arteries and that the cADPR-mediated Ca2+ signaling pathway plays a role in the control of vascular tone in coronary circulation.
ACCESSION NUMBER: 2000:92237 CAPLUS
DOCUMENT NUMBER: 132:164068
TITLE: Inhibition of cADP-**ribose** formation produces **vasodilation** in bovine coronary arteries
AUTHOR(S): Geiger, Jason; Zou, Ai-Ping; Campbell, William B.; Li, Pin-Lan
CORPORATE SOURCE: Department of Pharmacology and Toxicology and Physiology, Medical College of Wisconsin, Milwaukee, WI, 53226, USA
SOURCE: Hypertension (2000), 35(1, Pt. 2), 397-402
CODEN: HPRTDN; ISSN: 0194-911X
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L3 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB It was examd. whether human cardiac tissue contains diadenosine polyphosphates and investigated their physiol. role. Exts. from human cardiac tissue from transplant recipients were fractionated by size exclusion-, affinity-, anion exchange- and reversed-phase chromatog. MALDI-MS anal. of two absorbing fractions revealed mol. masses of 676.2 Da and 756.0 Da. The UV spectra of both fractions were identical to that of **adenosine**. Postsource decay MALDI mass spectrometry indicated that the mols. with a mass of 676.2 Da and 757.0 Da contained AMP and ATP, resp. As shown by enzymic cleavage, both mols. consist of two **adenosines** interconnected by either two or three phosphates in 5'-positions of the **riboses**. Two substances can be identified as 5',5'''-P1,P3-diphosphate (Ap2A) and 5',5'''-P1P3-triphosphate (Ap3A). Ap2A and Ap3A, together with ATP and ADP, are stored in myocardial-specific granules in biol. active concns. In the isolated perfused rat heart, Ap2A and Ap3A caused dose-dependent coronary **vasodilations**. In myocardial prepns., Ap2A and Ap3A attenuated the effect of isoproterenol, exerting a neg. inotropic effect. The calcium current of guinea pig ventricular myocytes, stimulated by isoproterenol, was also attenuated by Ap2A and Ap3A. The presence of Ap2A and Ap3A in cardiac-specific granules and the actions of these substances on the myocardium and coronary vessels indicate a role for these substances as endogenous modulators of myocardial functions and coronary perfusion. Identification and characterization of diadenosine 5',5'''-P1,P2-diphosphate and diadenosine 5',5'''P1,P3-triphosphate in human myocardial tissue.

ACCESSION NUMBER: 1999:223818 CAPLUS
DOCUMENT NUMBER: 131:16963
TITLE: Identification and characterization of diadenosine 5',5'''-P1,P2-diphosphate and diadenosine 5',5'''-P1,P3-triphosphate in human myocardial tissue
AUTHOR(S): Luo, J.; Jankowski, J.; Knobloch, M.; Van der giet, M.; Gardanis, K.; Russ, T.; Vahlensieck, U.; Neumann, J.; Schmitz, W.; Tepel, M.; Deng, M. C.; Zidek, W.; Schluter, H.
CORPORATE SOURCE: Medizinische Klinik I, Universitatsklinik Marienhospital der Ruhr-Universitat Bochum, Herne, D-44625, Germany
SOURCE: FASEB Journal (1999), 13(6), 695-705
CODEN: FAJOEC; ISSN: 0892-6638
PUBLISHER: Federation of American Societies for Experimental Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB The pharmacol. actions of the purine nucleotides .beta.-NAD, .beta.-NADP, ADP-**ribose**, the vitamin nicotinamide and structural analogs of NAD and NADP were tested in the isolated perfused mesenteric arterial bed of the rat. Prejunctional effects of NAD were tested against sympathetic vasoconstriction at basal tone, and against sensory-motor vasodilatation at raised tone. NAD and NADP had no vasoconstrictor action but were weak

vasodilators of the raised-tone mesenteric arterial bed. A rank order of vasodilator potency of ADP .mchgt. ADP-**ribose** .mchgt. NADP .gtoreq. NAD = **adenosine** was obsd. The P1-purinoceptor antagonist, 8-para-sulfophenyl-theophylline (8-pSPT; 3 .mu.M) inhibited vasodilator responses to NAD (pKB of 6.61) and **adenosine** (pKB of 5.78), but not those elicited by NADP, ADP and ADP-**ribose**. Nicotinamide, and analogs of NAD and NADP, namely nicotinamide-1,N6-ethenoadenine dinucleotide phosphate, .beta.-NMN, nicotinamide hypoxanthine dinucleotide phosphate, nicotinamide hypoxanthine dinucleotide, nicotinamide guanine dinucleotide, and nicotinamide-1,N6-ethenoadenine dinucleotide had no vasoconstrictor or vasodilator actions (at doses of .ltoreq.50 nmol). At basal tone, elec. field stimulation (EFS) (32 Hz, 1 ms, 90 V, 5 s) at 2 min intervals elicited reproducible vasoconstrictor responses due to activation of sympathetic nerves. NAD and **adenosine** (10-100 .mu.M) inhibited these responses in a concn.-dependent manner with similar potencies. Nicotinamide had no effect on sympathetic vasoconstriction at concns. of .ltoreq.0.1 mM. Postjunctional effects of NAD (100 .mu.M), as tested on constrictor response to NA (5 nmol), accounted for .apprx.60% inhibition at this concn. In prepns. in which tone had been raised with methoxamine (10-40 .mu.M), EFS (8 Hz, 0.1 ms, 60 V, for 30 s) elicited vasodilatation due to activation of sensory-motor nerves. This **vasodilation** was inhibited by NAD and **adenosine** (0.1-100 .mu.M) in a similar concn.-dependent manner: pD2 values were 6.2 and 6.1 for NAD and **adenosine** resp. Nicotinamide had no effect on sensory-motor vasodilatation at concns. of .ltoreq.0.1 mM. Inhibition of sympathetic constriction by NAD and **adenosine** was antagonized by 8-pSPT (3 .mu.M). Inhibitory effects of NAD and **adenosine** on sensory-motor **vasodilation** were similarly antagonized by 8-pSPT (1 .mu.M), pKB values were 6.72 for NAD and 6.36 for **adenosine**, resulting in parallel rightward shifts in the concn.-inhibitory effect curves. The **adenosine** deaminase inhibitor, pentostatin (1 .mu.M), augmented the inhibitory effects of NAD and **adenosine**. Concn.-inhibitory effect curves for NAD and **adenosine** on sympathetic vasoconstriction and sensory-motor **vasodilation** were shifted to the left without a change in the max. It is concluded that NAD can act as a modulator of sympathetic and sensory-motor transmission in rat mesenteric arteries via P1-purinoceptors possibly via direct actions but with a contribution of **adenosine** formed following breakdown of NAD or released pre- and/or postjunctionally. Structure-activity relationships of NAD, NADP, ADP and ADP-**ribose** showed that the P1-purinoceptor activity of NAD is abolished after removal of nicotinamide, or **ribose** plus nicotinamide, to yield the structurally-related ADP-**ribose** and ADP resp., or when there is phosphorylation of the 2'-hydroxyl group of NAD to yield NADP.

ACCESSION NUMBER: 1995:526198 CAPLUS
DOCUMENT NUMBER: 122:307049
TITLE: Modulation by nicotinamide adenine dinucleotide of sympathetic and sensory-motor neurotransmission via P1-purinoceptors in the rat mesenteric arterial bed
AUTHOR(S): Ralevic, Vera
CORPORATE SOURCE: Department Anatomy Developmental Biology, University College London, London, WC1E 6BT, UK
SOURCE: British Journal of Pharmacology (1995), 114(8), 1541-8
CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER: Stockton
DOCUMENT TYPE: Journal
LANGUAGE: English

L3 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB **Adenosine** 5'-chloro-5'-deoxyadenosine inhibited the phosphorylation of phosphatidylinositol in membranes prepd. from aortic smooth muscle. The nucleosides did not affect the breakdown of phosphatidylinositol 4-phosphate. Under certain conditions, the membrane-bound phosphatidylinositol kinase phosphorylated exogenous phosphatidylinositol. The nucleosides inhibited the enzyme competitively with respect to Mg-ATP and noncompetitively with respect to phosphatidylinositol. **Adenosine** analogs modified in the **ribose** moiety were inhibitors with potencies comparable to that of **adenosine**, whereas adenine nucleotides and purine-modified **adenosine** analogs were much weaker inhibitors. D. gradient fractionation studies showed that phosphatidylinositol kinase is primarily assocd. with the sarcoplasmic reticulum. Since vascular smooth muscle contraction is assocd. with increased phosphatidylinositol turnover, inhibition of phosphatidylinositol kinase by intracellular **adenosine** may be a factor involved in regulating **vasodilation**.

ACCESSION NUMBER: 1987:593874 CAPLUS
DOCUMENT NUMBER: 107:193874
TITLE: Inhibition of phosphatidylinositol kinase in vascular smooth muscle membranes by **adenosine** and related compounds
AUTHOR(S): Doctrow, Susan R.; Lowenstein, John M.
CORPORATE SOURCE: Grad. Dep. Biochem., Brandeis Univ., Waltham, MA, 02254, USA
SOURCE: Biochemical Pharmacology (1987), 36(14), 2255-62
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English

L3 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB Intracoronary **adenosine** [58-61-7] infusions into conscious dogs produced half-maximal coronary **vasodilation** at 0.57 .mu.M, similar activity was shown by 1.01 .mu.M **adenosine** in open-chest dogs. In both prepns., **adenosine** at concns. in the range found in cardiac muscle by direct anal. produced coronary **vasodilation** equal to that attained during a max. reactive hyperemic response. The quant. structure-activity relationship technique was applied to data on the coronary vasoactivity of 68 **adenosine** analogs to identify the chem. features of this mol. that det. its vasoactivity. These are: (1) the size of the purine base; (2) the inductive effect of the C-2 substituent; (3) the electron-withdrawing effect of the C-6 substituent; (4) the glycosylic torsion angle; (5) the ability of the C-2' and C-3'-hydroxyls to participate in H bonding; (6) the absence of sterically hindering groups in the vicinity of C-2' and, more importantly, C-3'; and (7) the inductive effect of the C-5' substituent. The hydrophobicity of these analogs did not correlate with vasoactivity. The hydrophilicity of the **ribose** moiety apparently overshadows any hydrophobic influence of the very weakly arom. purine base.

ACCESSION NUMBER: 1980:353 CAPLUS
DOCUMENT NUMBER: 92:353
TITLE: Coronary vasoactivity of **adenosine** in the conscious dog
AUTHOR(S): Olsson, Ray A.; Khouri, Edward M.; Bedynek, Julius L., Jr.; McLean, John
CORPORATE SOURCE: Dep. Cardiorespiratory Dis., Walter Reed Army Inst.

Res., Washington, DC, USA
SOURCE: Circ. Res. (1979), 45(4), 468-78
CODEN: CIRUAL; ISSN: 0009-7330
DOCUMENT TYPE: Journal
LANGUAGE: English

L3 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2002 ACS
AB **Adenosine** [58-61-7] (1 mM) infused intraarterially into a perfused dog hind limb prepn. resulted in a max. decrease in femoral arterial pressure of 40 mmHg; half-max. **vasodilation** was produced by 10 .mu.M **adenosine**. Withdrawal of stimulation of the sympathetic nerve to the limb did not abolish the response. **Adenosine** (1 .mu.M) also induced a small redn. in perfusion pressure in the superficial metatarsal vein. Infusion of adenine [73-24-5], **ribose** moieties, or nucleosides at concns. up to 10 times that required to produce max. **vasodilation** with **adenosine**, did not produce a fall of arterial resistance of >5%. Similarly, infusion of Na3PO4 (<100 mM) had little effect.
ACCESSION NUMBER: 1979:502885 CAPLUS
DOCUMENT NUMBER: 91:102885
TITLE: **Adenosine** and hind-limb vascular resistance in the dog
AUTHOR(S): Cotterrell, D.; Karim, F.
CORPORATE SOURCE: Dep. Physiol., Univ. Leeds, Leeds, Engl.
SOURCE: J. Physiol. (London) (1979), 290 47P
CODEN: JPHYA7; ISSN: 0022-3751
DOCUMENT TYPE: Journal
LANGUAGE: English

=> s 2',3'-O-isopropylidene(w)ribose?
L4 0 2',3'-O-ISOPROPYLIDENE(W) RIBOSE?

=> s 2',3'-O-isopropylidene ribose?
L5 0 2',3'-O-ISOPROPYLIDENE RIBOSE?

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	69.17	69.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.34	-4.34

FILE 'REGISTRY' ENTERED AT 13:03:39 ON 21 NOV 2002

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 NOV 2002 HIGHEST RN 474043-36-2
DICTIONARY FILE UPDATES: 20 NOV 2002 HIGHEST RN 474043-36-2

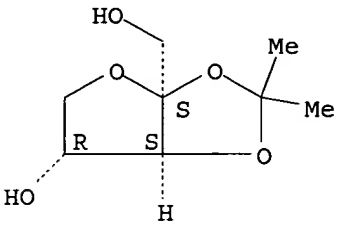
TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> e 2',3'-O-isopropylidene ribose/cn
E1            1      2,3-O-DIPALMITOYL-SN-GLYCEROL/CN
E2            1      2,3-O-ETHYLIDENE-D-ERYTHRONOLACTONE/CN
E3            0 --> 2,3-O-ISOPROPYLIDENE RIBOSE/CN
E4            1      2,3-O-ISOPROPYLIDENE-.ALPHA.-L-RHAMNOFURANOSYLAMINE
P-TOLUEN
                     ESULPHONATE/CN
E5            1      2,3-O-ISOPROPYLIDENE-.ALPHA.-L-SORBOFURANOSE/CN
E6            1      2,3-O-ISOPROPYLIDENE-.BETA.-D-APIOSE/CN
E7            1
2,3-O-ISOPROPYLIDENE-.BETA.-D-RIBOFURANOSYLAMINE-P-TOLUENESU
                     LFONATE/CN
E8            1      2,3-O-ISOPROPYLIDENE-.BETA.-D-THREO-PENTULOSONIC ACID/CN
E9            1      2,3-O-ISOPROPYLIDENE-.BETA.-D-THREO-PENTULOSONIC ACID
POTASS
                     IUM SALT/CN
E10           1      2,3-O-ISOPROPYLIDENE-.BETA.-D-XYLULOFURANOSE/CN
E11           1
2,3-O-ISOPROPYLIDENE-1,4-BIS-O-(METHYLSULFONYL)-D-THREITOL/C
                     N
E12           1      2,3-O-ISOPROPYLIDENE-1,4-DI-O-METHYL-L-THREITOL/CN

=> d e10
L5 HAS NO ANSWERS
L5             0 SEA 2',3'-O-ISOPROPYLIDENE RIBOSE?


=> s e10
L6             1 "2,3-O-ISOPROPYLIDENE-.BETA.-D-XYLULOFURANOSE"/CN

=> d rn cn

L6   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   25018-68-2  REGISTRY
CN   .beta.-D-threo-2-Pentulofuranose, 2,3-O-(1-methylethylidene)- (9CI)  (CA
     INDEX NAME)
OTHER CA INDEX NAMES:
CN   D-threo-Pentulofuranose, 2,3-O-isopropylidene- (6CI)
CN   D-threo-Pentulofuranose, 2,3-O-isopropylidene-, .beta.- (8CI)
CN   Furo[2,3-d]-1,3-dioxole, .beta.-D-threo-2-pentulofuranose deriv.
OTHER NAMES:
CN   2,3-O-Isopropylidene-.beta.-D-xylulofuranose


=> d l6

L6   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   25018-68-2  REGISTRY
CN   .beta.-D-threo-2-Pentulofuranose, 2,3-O-(1-methylethylidene)- (9CI)  (CA
     INDEX NAME)
OTHER CA INDEX NAMES:
CN   D-threo-Pentulofuranose, 2,3-O-isopropylidene- (6CI)
```

CN D-threo-Pentulofuranose, 2,3-O-isopropylidene-, .beta.- (8CI)
CN Furo[2,3-d]-1,3-dioxole, .beta.-D-threo-2-pentulofuranose deriv.
OTHER NAMES:
CN **2,3-O-Isopropylidene-.beta.-D-xylulofuranose**
FS STEREOSEARCH
MF C8 H14 O5
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e 2,3-O-isopropylidene ribose/cn
E1 1 2,3-O-DIPALMITOYL-SN-GLYCEROL/CN
E2 1 2,3-O-ETHYLIDENE-D-ERYTHRONOLACTONE/CN
E3 0 --> 2,3-O-ISOPROPYLIDENE RIBOSE/CN
E4 1 2,3-O-ISOPROPYLIDENE-.ALPHA.-L-RHAMNOFURANOSYLAMINE P-TOLUEN
ESULPHONATE/CN
E5 1 2,3-O-ISOPROPYLIDENE-.ALPHA.-L-SORBOFURANOSE/CN
E6 1 2,3-O-ISOPROPYLIDENE-.BETA.-D-APIOSE/CN
E7 1 2,3-O-ISOPROPYLIDENE-.BETA.-D-RIBOFURANOSYLAMINE-P-TOLUENESU
LFONATE/CN
E8 1 2,3-O-ISOPROPYLIDENE-.BETA.-D-THREO-PENTULOSONIC ACID/CN
E9 1 2,3-O-ISOPROPYLIDENE-.BETA.-D-THREO-PENTULOSONIC ACID POTASS
IUM SALT/CN
E10 1 2,3-O-ISOPROPYLIDENE-.BETA.-D-XYLULOFURANOSE/CN
E11 1 2,3-O-ISOPROPYLIDENE-1,4-BIS-O-(METHYLSULFONYL)-D-THREITOL/C
N
E12 1 2,3-O-ISOPROPYLIDENE-1,4-DI-O-METHYL-L-THREITOL/CN

=> fil .carb

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.58	80.17
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.34

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=> s 2,3-O-isopropylidene ribose
L7 0 2,3-O-ISOPROPYLIDENE RIBOSE

=> s 2,3-O-isopropylidene(2a)ribose
L8 55 2,3-O-ISOPROPYLIDENE(2A) RIBOSE

=> s l8 and adenosine?
L9 0 L8 AND ADENOSINE?

=> s l8 and vasodilation?
L10 0 L8 AND VASODILATION?

=> s l8 and purine?
L11 1 L8 AND PURINE?

=> d l11

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 2000:331681 CAPLUS
TI Cyclonucleosides.
AU Brajeswar, Paul; Mayer, Bruce F.; Porter, Carl
CS Roswell Park Cancer Institute, Grace Cancer Drug Center, Buffalo, NY, 14263-0001, USA
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-079 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CLAC
DT Conference; Meeting Abstract
LA English

=> d l11 abs ibib

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AB Pyrimidine and **purine** cyclonucleosides are of interest for making modification to the ribose moiety. We have reported the synthesis of 2'-hydroxy-and 3'-hydroxyftorafur using 2,2'-O-pyrimidine cyclonucleoside (Abstr. 205th Am. Chem. Soc.Nat.Mtg.,Denver,CO, Mar. 28-Apr. 2,1993, MEDI 24). A pyrimidine cyclonucleoside was obtained when an aq. soln. of 1-(2'-azido-2'-deoxy-.beta.--arabinofuranosyl)cytosine was heated, leading to 6, 2'-imino-2'-deoxy-.beta.-D-arabinofuranosylcytosine (Abstr. 2nd Chem.Congress on the North American Continent, San Francisco, CA, August 1980, CARB 6). Currently we are working on the synthesis of **purine** cyclonucleosides, in particular 8,5'-O-and 8,5'-S-cycloadenosine. As reported in the literature, it is necessary to block 2',3'-hydroxyl groups of D-**ribose** as in **2'**,

3'-O-isopropylidene to facilitate the cyclisation. Removal of the isopropylidine protecting group under acidic condition took a longer time when compared to that of 2',3'-O-isopropylidene **purine** nucleoside. Cyclonucleosides are rigid mols. and this may affect chem. reactivity. The synthesis NMR mol. modeling data and conformational anal. will be presented (Supported by NIH Grant 16056).

ACCESSION NUMBER: 2000:331681 CAPLUS
TITLE: Cyclonucleosides.
AUTHOR(S): Brajeswar, Paul; Mayer, Bruce F.; Porter, Carl
CORPORATE SOURCE: Roswell Park Cancer Institute, Grace Cancer Drug Center, Buffalo, NY, 14263-0001, USA
SOURCE: Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-079. American Chemical Society: Washington, D. C.
CODEN: 69CLAC
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

=> d l8 1-55

L8 ANSWER 1 OF 55 MEDLINE
AN 90112400 MEDLINE
DN 90112400 PubMed ID: 2296029
TI Growth inhibition and induction of cellular differentiation of human myeloid leukemia cells in culture by carbamoyl congeners of ribavirin.
AU Sanghvi Y S; Bhattacharya B K; Kini G D; Matsumoto S S; Larson S B; Jolley W B; Robins R K; Revankar G R
CS ICN Nucleic Acid Research Institute, Costa Mesa, California 92626.
SO JOURNAL OF MEDICINAL CHEMISTRY, (1990 Jan) 33 (1) 336-44.
Journal code: 9716531. ISSN: 0022-2623.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199002
ED Entered STN: 19900328
Last Updated on STN: 19970203
Entered Medline: 19900222

L8 ANSWER 2 OF 55 MEDLINE
AN 76005891 MEDLINE
DN 76005891 PubMed ID: 1171879
TI C-nucleoside studies. Part II. Pentofuranosylethynes from **2**, **3-O-isopropylidene**-D-**ribose**.
AU Buchanan J G; Dunn A D; Edgar A R
SO JOURNAL OF THE CHEMICAL SOCIETY. PERKIN TRANSACTIONS 1, (1975) (13) 1191-200.
Journal code: 7505598. ISSN: 0300-922X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197511
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19751126

L8 ANSWER 3 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:365193 BIOSIS
DN BA94:47243
TI CONFORMATIONAL VARIABILITY IN MODIFIED NUCLEOSIDES CRYSTAL AND MOLECULAR STRUCTURE OF 2' 3'-O ISOPROPYLIDENE INOSINE.
AU MANDE S S; SHAMALA N; SESHADRI T P; VISWAMITRA M A
CS DEP. PHYSICS JAWAHARLAL NEHRU CENTRE ADVANCED SCIENTIFIC RESEARCH, INDIAN INST. SCI., BANGALORE-560 012, INDIA.
SO NUCLEOSIDES NUCLEOTIDES, (1992) 11 (5), 1103-1114.
CODEN: NUNUD5. ISSN: 0732-8311.
FS BA; OLD
LA English

L8 ANSWER 4 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1990:134340 BIOSIS
TI GROWTH INHIBITION AND INDUCTION OF CELLULAR DIFFERENTIATION OF HUMAN MYELOID LEUKEMIA CELLS IN CULTURE BY CARBAMOYL CONGENERS OF RIBAVIRIN.
AU SANGHVI Y S; BHATTACHARYA B K; KINI G D; MATSUMOTO S S; LARSON S B; JOLLEY
W B; ROBINS R K; REVANKAR G R
CS ICI NUCLEIC ACID RES. INST., 330 HYLAND AVE., COSTA MESA, CALIF. 92626.
SO J MED CHEM, (1990) 33 (1), 336-344.
CODEN: JMCMAR. ISSN: 0022-2623.
FS BA; OLD
LA English

L8 ANSWER 5 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1989:90085 BIOSIS
DN BA87:44221
TI ALDOL REACTION OF REDUCING SUGARS CONVENIENT STEREOSELECTIVE SYNTHESIS OF RIBOFURANOSYLACETONE AND CHIRAL DIENONES.
AU CALVO-MATEO A; CAMARASA M-J; DIAZ-ORTIZ A; DE LAS HERAS F G; ALEMANY A
CS INSTITUTO DE QUIMICA MEDICA, C.S.I.C., JUAN DE LA CIERVA 3, 28006-MADRID, SPAIN.
SO J CHEM SOC PERKIN TRANS I, (1988) 0 (10), 2861-2864.
CODEN: JCPRB4. ISSN: 0300-922X.
FS BA; OLD
LA English

L8 ANSWER 6 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:500179 BIOSIS
DN BA86:120863
TI VINYLATION-ELECTROPHILIC CYCLIZATION OF ALDOPENTOSES EASY AND STEREOSELECTIVE ACCESS OF C GLYCOPYRANOSIDES OF RARE SUGARS.
AU BOSCHETTI A; NICOTRA F; PANZA L; RUSSO G
CS DIP. CHIM. ORG. INDUSTRIALE DELL'UNIV., CENT. STUDIO SOSTANZE ORG. NATURALI CNR, VIA VENEZIAN 21, 20133 MILANO, ITALY.
SO J ORG CHEM, (1988) 53 (18), 4181-4185.
CODEN: JOCEAH. ISSN: 0022-3263.
FS BA; OLD
LA English

L8 ANSWER 7 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:283219 BIOSIS
DN BA86:11486
TI STEREOSELECTIVE CYCLIZATIONS OF UNSATURATED ESTERS DERIVED FROM **2 3-O ISOPROPYLIDENE**-D-**RIBOSE**.
AU DREW M G B; KANE P D; MANN J; NAILI M
CS DEP. CHEM., UNIV. READING, WHITEKNIGHTS, P.O. BOX 224, READING, BERKSHIRE,

RG6 2AD.
SO J CHEM SOC PERKIN TRANS I, (1988) 0 (3), 433-438.
CODEN: JCPRB4. ISSN: 0300-922X.
FS BA; OLD
LA English

L8 ANSWER 8 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:182079 BIOSIS
DN BA85:94181
TI AN ALTERNATIVE TOTAL SYNTHETIC APPROACH TOWARD OCTOSYL ACID A.
AU KOZAKI S; SAKANAKA O; YASUDA T; SHIMIZU T; OGAWA S; SUAMI T
CS DEP. APPLIED CHEM., FAC. SCI. AND TECHNOL., KEIO UNIV., HIYOSHI, YOKOHAMA,
223 JAPAN.
SO J ORG CHEM, (1988) 53 (2), 281-286.
CODEN: JOCEAH. ISSN: 0022-3263.
FS BA; OLD
LA English

L8 ANSWER 9 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:129743 BIOSIS
DN BA85:64570
TI ENANTIOSPECIFIC SYNTHESIS OF DEXTRO RETRONECINE DEXTRO CROTONECINE AND RELATED ALKALOIDS.
AU BUCHANAN J G; JIGAJINNI V B; SINGH G; WIGHTMAN R H
CS DEP. CHEM., HERIOT-WATT UNIV., RICCARTON, EDINBURGH EH14 4AS.
SO J CHEM SOC PERKIN TRANS I, (1987) 0 (11), 2377-2384.
CODEN: JCPRB4. ISSN: 0300-922X.
FS BA; OLD
LA English

L8 ANSWER 10 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1986:217986 BIOSIS
DN BA81:109286
TI TWO TOTAL SYNTHESES OF SHOWDOMYCIN AND RELATED STUDIES.
AU BARRETT A G M; BROUGHTON H B; ATTWOOD S V; GUNATILAKA A A L
CS DEP. CHEM., NORTHEWESTERN UNIV., EVANSTON, ILL. 60201.
SO J ORG CHEM, (1986) 51 (4), 495-503.
CODEN: JOCEAH. ISSN: 0022-3263.
FS BA; OLD
LA English

L8 ANSWER 11 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1985:432281 BIOSIS
DN BA80:102273
TI A NEW SYNTHESIS OF LEVO ANISOMYCIN AND ITS DEMETHOXY ANALOG FROM D RIBOSE.
AU BUCHANAN J G; MACLEAN K A; WIGHTMAN R H; PAULSEN H
CS DEP. CHEM., HERIOT-WATT UNIV., EDINBURGH EH14 4AS.
SO J CHEM SOC PERKIN TRANS I, (1985) 0 (7), 1463-1470.
CODEN: JCPRB4. ISSN: 0300-922X.
FS BA; OLD
LA English

L8 ANSWER 12 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1982:308145 BIOSIS
DN BA74:80625
TI SYNTHESIS OF 4 5 DI DEOXY-4-C-R S-PHENYLPHOSPHINYL-D RIBO FURANOSE AND L LYXO FURANOSE AND THEIR 1 2 3 TRI ACETATES.
AU YAMAMOTO H; NAKAMURA Y; KAWAMOTO H; INOKAWA S; YAMASHITA M; ARMOUR M-A;

NAKASHIMA T T
CS DEP. CHEM., FAC. SCI., OKAYAMA UNIV., OKAYAMA 700, JPN.
SO CARBOHYDR RES, (1982) 102 (0), 185-196.
CODEN: CRBRAT. ISSN: 0008-6215.
FS BA; OLD
LA English

L8 ANSWER 13 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1979:211441 BIOSIS
DN BA68:13945
TI A NOVEL SYNTHESIS OF RIBAVIRIN AND RELATED NUCLEOSIDES.
AU WITKOWSKI J T; CHRISTENSEN L F; ROBINS R K
CS SCHERING CORP., BLOOMFIELD, N.J. 07003, USA.
SO J CARBOHYDR NUCLEOSIDES NUCLEOTIDES, (1978) 5 (4), 363-372.
CODEN: JCNNAF. ISSN: 0094-0585.
FS BA; OLD
LA English

L8 ANSWER 14 OF 55 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1979:210720 BIOSIS
DN BA68:13224
TI BRANCHED CHAIN SUGARS REACTION OF FURANOSES WITH FORMALDEHYDE A STEREOSPECIFIC SYNTHESIS OF L DENDRO KETOSE.
AU HO P-T
CS DIV. BIOL. SCI., NATL. RES. COUNC. CAN., OTTAWA, ONT. K1A 0R6, CAN.
SO CAN J CHEM, (1979) 57 (4), 384-386.
CODEN: CJCHAG. ISSN: 0008-4042.
FS BA; OLD
LA English

L8 ANSWER 15 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 2002:325108 CAPLUS
DN 137:86205
TI 4,4-Dimethyl-3,5,8,10-tetraoxatricyclo[5.2.1.02,6]decane
AU Light, Mark E.; Murphy, Patrick J.; Brown, Paul M.; Hursthouse, Michael B.
CS Department of Chemistry, University of Southampton, Hampshire, Southampton, SO17 1BJ, UK
SO Acta Crystallographica, Section E: Structure Reports Online (2002), E58(5), o560-o561
CODEN: ACSEBH; ISSN: 1600-5368
URL: http://journals.iucr.org/e/issues/2002/05/00/ya6101/ya6101.pdf
PB International Union of Crystallography
DT Journal; (online computer file)
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 16 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 2001:774516 CAPLUS
TI 2,5-Dihydroxy-3,4-O-isopropylidene-tetrahydrofuran for the synthesis of heterocycles
AU Van denHeuvel, Marco; Sayers, Mick; Singh, Gurdial
CS Dep. Chem., Univ. Sunderland, Suderland, SR1 3SD, UK
SO ARKIVOC (2000), 1(5), 748-754
CODEN: AKVCFI
URL: http://www.arkat.org/arkat/journal/Issue5/ms0075/ms0075.pdf
PB ARKAT Foundation
DT Journal; (online computer file)
LA English

L8 ANSWER 17 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 2001:300907 CAPLUS
DN 134:311400
TI Hybridization probes containing cytosine derivs. capable of forming two hydrogen bonds specifically with guanine base
IN Otsuka, Masami; Yamazaki, Tetsurou; Gunji, Shigemichi; Yu, Fujio
PA Mitsubishi Rayon Co., Ltd., Japan; Genox Research, Inc.
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001029258	A1	20010426	WO 2000-JP7189	20001017

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI JP 1999-296746 A 19991019
OS MARPAT 134:311400
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 18 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 2000:331681 CAPLUS
TI Cyclonucleosides.
AU Brajeswar, Paul; Mayer, Bruce F.; Porter, Carl
CS Roswell Park Cancer Institute, Grace Cancer Drug Center, Buffalo, NY, 14263-0001, USA
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-079 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CLAC
DT Conference; Meeting Abstract
LA English

L8 ANSWER 19 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 2000:234184 CAPLUS
DN 133:58985
TI Synthesis of C2-d1-**2,3-O-isopropylidene**-D-**ribose**
AU Kundu, Mrinal K.; Foldesi, Andras; Chattopadhyaya, Jyoti
CS Department of Bioorganic Chemistry, Uppsala University, Uppsala, S-751 23, Swed.
SO Collection Symposium Series (1999), 2(Chemistry of Nucleic Acid Components), 47-52
CODEN: CSYSFN
PB Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DT Journal
LA English
OS CASREACT 133:58985

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 20 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1997:630786 CAPLUS
DN 127:262997
TI Preparation of .beta.-C azanucleoside derivatives as glycosidase inhibitors
IN Yokoyama, Masataka; Togo, Hideo
PA Nihon Nohyaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09249664	A2	19970922	JP 1996-81019	19960309

OS CASREACT 127:262997; MARPAT 127:262997

L8 ANSWER 21 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1997:443821 CAPLUS
DN 127:121946
TI Enantiospecific synthesis of (-)-5-epi-shikimic acid and (-)-shikimic acid
AU Jiang, Shende; McCullough, Kevin J.; Mekki, Boualem; Singh, Gurdial; Wightman, Richard H.
CS Dep. Chem., Univ. Sunderland, Sunderland, SR1 3SD, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1997), (12), 1805-1814
CODEN: JCPRB4; ISSN: 0300-922X
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 127:121946

L8 ANSWER 22 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1997:323076 CAPLUS
DN 127:65714
TI Solvent and salt dependent 1,3-dipolar cycloaddition: synthesis of isoxazolidino- and isoxazolino-carbocycles
AU Bar, Narayan C.; Roy, Atanu; Patra, Ranjan; Achari, Basudeb; Mandal, Sukhendu B.
CS Indian Institute of Chemical Biology, Calcutta, 700 032, India
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1997), 36B(3), 275-277
CODEN: IJSBDB; ISSN: 0376-4699
PB National Institute of Science Communication
DT Journal
LA English
OS CASREACT 127:65714

L8 ANSWER 23 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1997:81650 CAPLUS
DN 126:157681
TI Stereoselective benzylic .alpha.-acylamino radical cyclization: a model study for the Tacaman indole alkaloid skeleton
AU Clauss, Rainer; Hunter, Roger
CS Dep. Chem., Univ. Cape Town, Rondebosch, 7700, S. Afr.
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and

Bio-Organic Chemistry (1997), (1), 71-76
CODEN: JCPRB4; ISSN: 0300-922X
PB Royal Society of Chemistry
DT Journal
LA English

L8 ANSWER 24 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1996:198376 CAPLUS
DN 124:344020
TI Synthesis of bestatin, a potent inhibitor of leukotriene A4 hydrolase, by an N3 nucleophile reaction to a non-protected diol
AU Koseki, Koshi; Ebata, Takashi; Matsushita, Hajime
CS Japan Tobacco Inc., Life Science Research Laboratory, Kanagawa, 227, Japan
SO Bioscience, Biotechnology, and Biochemistry (1996), 60(3), 534-6
CODEN: BBBIEJ; ISSN: 0916-8451
PB Japan Society for Bioscience, Biotechnology, and Agrochemistry
DT Journal
LA English
OS CASREACT 124:344020

L8 ANSWER 25 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1996:158254 CAPLUS
DN 124:343890
TI Synthesis of a new inhibitor of .alpha.-fucosidase
AU Igarashi, Yasuhiro; Ichikawa, Mie; Ichikawa, Yoshitaka
CS Dep. Pharmacology and Mol. Sci., Johns Hopkins Univ. School of Medicine, Baltimore, MD, 21205, USA
SO Bioorganic & Medicinal Chemistry Letters (1996), 6(5), 553-8
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier
DT Journal
LA English
OS CASREACT 124:343890

L8 ANSWER 26 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1996:154377 CAPLUS
DN 124:343889
TI Double asymmetric iodoamination; synthesis of C2 symmetric and meso-amino alcohols
AU Kang, Sung Ho; Ryu, Do Hyun
CS Dep. Chem., Korea Adv. Inst. Sci. Technol., Taejon, 305-701, S. Korea
SO Chemical Communications (Cambridge) (1996), (3), 355-6
CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English

L8 ANSWER 27 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1996:84647 CAPLUS
DN 124:232945
TI A New Synthetic Approach to the Carbocyclic Core of Cyclopentane-Type Glycosidase Inhibitors: Asymmetric Synthesis of Amino cyclopentitols via Free Radical Cycloisomerization of Enantiomerically Pure Alkyne-Tethered Oxime Ethers Derived from Carbohydrates
AU Marco-Contelles, Jose; Destabel, Christine; Gallego, Pilar; Chiara, Jose Luis; Bernabe, Manuel
CS Instituto de Quimica Organica General, CSIC, Madrid, 28006, Spain
SO Journal of Organic Chemistry (1996), 61(4), 1354-62
CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society
DT Journal
LA English
OS CASREACT 124:232945

L8 ANSWER 28 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1996:13029 CAPLUS
DN 124:56742
TI Method for producing optically active 4-aryl-2,3-dihydroxybutyric acid derivatives as intermediates for bestatin
IN Koseki, Yukifumi; Ebata, Takashi; Matsushita, Hajime
PA Nippon Tobacco Sangyo, Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07228549	A2	19950829	JP 1994-20339	19940217

OS CASREACT 124:56742; MARPAT 124:56742

L8 ANSWER 29 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1995:933758 CAPLUS
DN 124:146696
TI Stereoselective synthesis of 3-.beta.-D-ribofuranosylpyrazole from **2,3-O-isopropylidene**-D-**ribose**; a new route to pyrazole C-nucleosides
AU Rycroft, Anthony D.; Singh, Gurdial; Wightman, Richard H.
CS Sch. Science and Technology, Univ. Teesside, Middlesbrough, cleveland, TS1 3BA, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1995), (21), 2667-8
CODEN: JCPRB4; ISSN: 0300-922X
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 124:146696

L8 ANSWER 30 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1995:784522 CAPLUS
DN 124:30134
TI Free radical cycloisomerization of enantiomerically pure alkyne-tethered oxime ethers: A new method for the asymmetric synthesis of aminocyclopentitols
AU Marco-Contelles, Jose; Destael, Christine; Chiara, Jose Luis; Bernabe, Manuel
CS Instituto de Quimica Organica General, Madrid, 28006, Spain
SO Tetrahedron: Asymmetry (1995), 6(7), 1547-50
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier
DT Journal
LA English
OS CASREACT 124:30134

L8 ANSWER 31 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1995:550018 CAPLUS
DN 123:112425
TI Benzyl 2,3-O-isopropylidene-.beta.-D-ribo-1,4-pentodialdofuranoside as a

D-ribose chiron for the synthesis of terpenyl tetraols and aminotriols
AU Duvold, Tore; Francis, George W.; Papaioannou, Dionissios
CS Dep. Chem., Univ. Bergen, Bergen, N-5007, Norway
SO Tetrahedron Letters (1995), 36(18), 3153-6
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier
DT Journal
LA English

L8 ANSWER 32 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1994:701163 CAPLUS
DN 121:301163
TI Simple synthesis of all four stereoisomers of 2,2,5-trimethyl-1,3-dioxolane-4-carbaldehyde
AU Binder, W. H.; Prenner, R. H.; Schmid, W.
CS Inst. Organische Chemie, Univ. Wien, Vienna, A-1090, Austria
SO Monatshefte fuer Chemie (1994), 125(6-7), 763-71
CODEN: MOCMB7; ISSN: 0026-9247
DT Journal
LA German
OS CASREACT 121:301163

L8 ANSWER 33 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1994:509461 CAPLUS
DN 121:109461
TI Synthesis and polymerization of **2,3-O-isopropylidene**-D-**ribose** and its derivatives
AU Wu, Chengpei; Li, Hongwei; Pan, Caiyuan; Uryu, Toshiyuki
CS Dep. Mater. Sci. Eng., China Univ. Sci. Technol., Hefei, 230026, Peop. Rep. China
SO Zhongguo Kexue Jishu Daxue Xuebao (1993), 23(4), 436-41
CODEN: CKHPD7; ISSN: 0253-2778
DT Journal
LA Chinese

L8 ANSWER 34 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1993:254620 CAPLUS
DN 118:254620
TI Preparation of 4-(cis-alkenyl)-.gamma.-lactones as pheromones and its novel intermediates
IN Koseki, Koshi; Kawakami, Hiroshi; Ebata, Takashi; Matsushita, Hajime; Ono, Mikio
PA Japan Tobacco, Inc., Japan; Fuji Flavor Co., Ltd.
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9214720	A1	19920903	WO 1992-JP150	19920217
	W: JP, US				
	RW: DE, FR, GB				
	EP 528044	A1	19930224	EP 1992-905003	19920217
	EP 528044	B1	19970813		
	R: DE, FR, GB				
	US 5374744	A	19941220	US 1992-937848	19921021
PRAI	JP 1991-77376		19910221		
	WO 1992-JP150		19920217		

OS CASREACT 118:254620

L8 ANSWER 35 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1992:531447 CAPLUS
DN 117:131447
TI A new method for synthesis of **2,3-O-isopropylidene** derivatives of **ribose**
AU Li, Zhanjiang; He, Dayan; Li, Zhongjun; Qiu, Dongxu; Liu, Yunqi; Jiao, Xianyun; Cai, Mengshen
CS Dep. Org. Chem., Beijing Med. Univ., Beijing, Peop. Rep. China
SO Beijing Yike Daxue Xuebao (1991), 23(5), 417-8
CODEN: BYDXEV; ISSN: 1000-1530
DT Journal
LA Chinese
OS CASREACT 117:131447

L8 ANSWER 36 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1990:36356 CAPLUS
DN 112:36356
TI Growth inhibition and induction of cellular differentiation of human myeloid leukemia cells in culture by carbamoyl congeners of ribavirin
AU Sanghvi, Yogesh S.; Bhattacharya, Birendra K.; Kini, Ganesh D.; Matsumoto, Steven S.; Larson, Steven B.; Jolley, Weldon B.; Robins, Roland K.; Revankar, Ganapathi R.
CS ICN Nucleic Acid Res. Inst., Costa Mesa, CA, 92626, USA
SO Journal of Medicinal Chemistry (1990), 33(1), 336-44
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CASREACT 112:36356

L8 ANSWER 37 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1989:173572 CAPLUS
DN 110:173572
TI Aldol reaction of reducing sugars. Convenient stereoselective synthesis of ribofuranosylacetone and chiral dienones
AU Calvo-Mateo, Ana; Camarasa, Maria Jose; Diaz-Ortiz, Angel; De las Heras, Federico G.; Alemany, Antonio
CS Inst. Quim. Med., CSIC, Madrid, 28006, Spain
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1988), (10), 2861-3
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
OS CASREACT 110:173572

L8 ANSWER 38 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1989:39297 CAPLUS
DN 110:39297
TI Synthesis of nucleosides using ketene dithioacetals
AU Yokoyama, Masataka; Kumata, Katsushi; Yamada, Naoyuki; Noro, Hidehiko; Sudo, Yuka
CS Fac. Sci., Chiba Univ., Chiba, 260, Japan
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1988), (8), 2309-13
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
OS CASREACT 110:39297

L8 ANSWER 39 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1988:570727 CAPLUS
DN 109:170727
TI Stereoselective cyclizations of unsaturated esters derived from **2,3-O-isopropylidene-D-ribose**
AU Drew, Michael G. B.; Kane, Peter D.; Mann, John; Naili, Mahbuba
CS Dep. Chem., Univ. Reading, Reading/Berkshire, RG6 2AD, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1988), (3), 433-7
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
OS CASREACT 109:170727

L8 ANSWER 40 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1988:510708 CAPLUS
DN 109:110708
TI Enantiospecific synthesis of (+)-retronecine, (+)-crotonecine, and related alkaloids
AU Buchanan, J. Grant; Jigajinni, Veerappa B.; Singh, Gurdial; Wightman, Richard H.
CS Dep. Chem., Heriot-Watt Univ., Edinburgh, EH14 4AS, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1987), (11), 2377-84
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
OS CASREACT 109:110708

L8 ANSWER 41 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1986:573001 CAPLUS
DN 105:173001
TI 7-(Ribofuranosylmethyl)imidazopyridazine derivatives
IN Knight, David John; Scopes, David Ian Carter; Storer, Richard; Holman, Stuart
PA Glaxo Group Ltd., UK
SO Ger. Offen., 69 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3541358	A1	19860528	DE 1985-3541358	19851122
	FR 2573764	A1	19860530	FR 1985-17238	19851121
	BE 903699	A1	19860522	BE 1985-215903	19851122
	SE 8505534	A	19860524	SE 1985-5534	19851122
	DK 8505401	A	19860524	DK 1985-5401	19851122
	FI 8504619	A	19860524	FI 1985-4619	19851122
	NO 8504692	A	19860526	NO 1985-4692	19851122
	GB 2167419	A1	19860529	GB 1985-28766	19851122
	GB 2167419	B2	19880323		
	AU 8550299	A1	19860529	AU 1985-50299	19851122
	NL 8503225	A	19860616	NL 1985-3225	19851122
	JP 61165385	A2	19860726	JP 1985-261614	19851122
	CN 85109195	A	19861105	CN 1985-109195	19851122
	ES 549190	A1	19870416	ES 1985-549190	19851122
	ZA 8508964	A	19870729	ZA 1985-8964	19851122

	US 4690917	A	19870901	US 1985-800667	19851122
	ES 556894	A1	19870716	ES 1986-556894	19860716
PRAI	GB 1984-29694		19841123		

L8 ANSWER 42 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1986:572090 CAPLUS
DN 105:172090
TI An enantiospecific synthesis of (+)-disparlure from carbohydrate precursors
AU Jigajinni, Veerappa B.; Wightman, Richard H.
CS Dep. Chem., Heriot-Watt Univ., Edinburgh, EH14 4AS, UK
SO Carbohydrate Research (1986), 147(1), 145-8
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OS CASREACT 105:172090

L8 ANSWER 43 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1986:110105 CAPLUS
DN 104:110105
TI Two total syntheses of showdomycin and related studies
AU Barrett, Anthony G. M.; Broughton, Howard B.; Attwood, Steven V.; Gunatilaka, A. A. Leslie
CS Dep. Chem., Northwestern Univ., Evanston, IL, 60201, USA
SO Journal of Organic Chemistry (1986), 51(4), 495-503
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
OS CASREACT 104:110105

L8 ANSWER 44 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1984:156883 CAPLUS
DN 100:156883
TI Antiviral compounds. 2. The preparation and activity of some substituted 3-methyl-1-phenyl-5-pyrazolones
AU Breuer, Eli; Melumad, David; Sarel, Shalom; Margalith, Eva; Katz, Ehud
CS Sch. Pharm., Heb. Univ., Jerusalem, Israel
SO European Journal of Medicinal Chemistry (1983), 18(6), 481-5
CODEN: EJMCA5; ISSN: 0009-4374
DT Journal
LA English

L8 ANSWER 45 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1982:218126 CAPLUS
DN 96:218126
TI Synthesis of 4,5-dideoxy-4-C-[(R,S)-phenylphosphinyl]-D-ribo- and L-lyxofuranose and their 1,2,3-triacetates
AU Yamamoto, Hiroshi; Nakamura, Yuhji; Kawamoto, Heizan; Inokawa, Saburo; Yamashita, Mitsuji; Armour, Margaret Ann; Nakashima, Tom T.
CS Fac. Sci., Okayama Univ., Okayama, 700, Japan
SO Carbohydr. Res. (1982), 102(1), 185-96
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English

L8 ANSWER 46 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1979:187242 CAPLUS
DN 90:187242
TI Branched-chain sugars. Reaction of furanoses with formaldehyde: a

stereospecific synthesis of L-dendroketose
AU Ho, Pak-Tsun
CS Div. Biol. Sci., Natl. Res. Counc. Canada, Ottawa, Ont., Can.
SO Can. J. Chem. (1979), 57(4), 384-6
CODEN: CJCHAG; ISSN: 0008-4042
DT Journal
LA English

L8 ANSWER 47 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1979:168937 CAPLUS
DN 90:168937
TI 1,2,4-Triazole nucleosides
IN Christensen, Leon F.; Witkowski, Joseph T.
PA ICN Pharmaceuticals, Inc., USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4138547	A	19790206	US 1977-863293	19771222

L8 ANSWER 48 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1978:121577 CAPLUS
DN 88:121577
TI C-glycosyl derivatives in nitro sugar chemistry: synthesis of D-ribofuranosylnitromethane derivatives and their epimerization under neutral conditions
AU Takamoto, Tetsuyoshi; Omi, Hiroshi; Matsuzaki, Toshihiko; Sudoh, Rokuro
CS Fac. Sci., Tokyo Inst. Technol., Tokyo, Japan
SO Carbohydr. Res. (1978), 60(1), 97-103
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English

L8 ANSWER 49 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1975:514810 CAPLUS
DN 83:114810
TI C-nucleoside studies. II. Pentofuranosylethynes from **2,3-O-isopropylidene-D-ribose**
AU Buchanan, J. Grant; Dunn, Allan D.; Edgar, Alan R.
CS Dep. Chem., Heriot-Watt Univ., Edinburgh, Scot.
SO J. Chem. Soc., Perkin Trans. 1 (1975), (13), 1191-200
CODEN: JCPRB4
DT Journal
LA English

L8 ANSWER 50 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1975:17018 CAPLUS
DN 82:17018
TI Reaction of ethynylmagnesium bromide with **2,3-O-isopropylidene-D-ribose** and 2,3:5,6-di-O-isopropylidene-D-mannofuranose. Syntheses of glycofuranosylethynes
AU Buchanan, J. Grant; Dunn, Allan D.; Edgar, Alan R.
CS Dep. Chem., Heriot-Watt Univ., Riccarton/Currie/Edinburgh, Scot.
SO Carbohydr. Res. (1974), 36(1), C5-C7
CODEN: CRBRAT
DT Journal

LA English

L8 ANSWER 51 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1973:4436 CAPLUS
DN 78:4436
TI Oxidation of carbohydrate derivatives with silver carbonate on celite. V.
Oxidation of some O-isopropylidene aldoses with unsubstituted anomeric hydroxyl group
AU Morgenlie, Svein
CS Dep. Chem., Agric. Coll., Vollebekk, Norway
SO Acta Chem. Scand. (1972), 26(6), 2518-22
CODEN: ACSAA4
DT Journal
LA English

L8 ANSWER 52 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1972:14820 CAPLUS
DN 76:14820
TI Epimerization of monosaccharides under acetolysis conditions
AU Sowa, Walter
CS Dep. Org. Chem., Ontario Res. Found., Sheridan Park, Ont., Can.
SO Can. J. Chem. (1971), 49(20), 4292-8
CODEN: CJCHAG
DT Journal
LA English

L8 ANSWER 53 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1966:473805 CAPLUS
DN 65:73805
OREF 65:13807g
TI Selective reduction of substituted aldonolactones to aldose derivatives
AU Hulyalkar, R. K.
CS Queen's Univ., Kingston
SO Can. J. Chem. (1966), 44(13), 1594-6
DT Journal
LA English

L8 ANSWER 54 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1966:438732 CAPLUS
DN 65:38732
OREF 65:7254d-f
TI Preparation of bisulfite addition compounds of 5-amino-5-deoxy-D-xylose
AU Ingles, D. L.
CS Commonwealth Sci. Ind. Res. Organ., North Ryde
SO Australian J. Chem. (1966), 19(4), 667-73
DT Journal
LA English

L8 ANSWER 55 OF 55 CAPLUS COPYRIGHT 2002 ACS
AN 1962:411032 CAPLUS
DN 57:11032
OREF 57:2294e-i,2295a-c
TI 5-O-Methyl-D-ribose and 5-O-methyl-D-ribitol
AU Ranch, Emil B.; Lipkin, David
CS Washington Univ., St. Louis, MO
SO J. Org. Chem. (1962), 27, 403
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable

=> s l8 and nucleoside?
L12 13 L8 AND NUCLEOSIDE?

=> d l12 1-13

L12 ANSWER 1 OF 13 MEDLINE
AN 90112400 MEDLINE
DN 90112400 PubMed ID: 2296029
TI Growth inhibition and induction of cellular differentiation of human myeloid leukemia cells in culture by carbamoyl congeners of ribavirin.
AU Sanghvi Y S; Bhattacharya B K; Kini G D; Matsumoto S S; Larson S B; Jolley W B; Robins R K; Revankar G R
CS ICN Nucleic Acid Research Institute, Costa Mesa, California 92626.
SO JOURNAL OF MEDICINAL CHEMISTRY, (1990 Jan) 33 (1) 336-44.
Journal code: 9716531. ISSN: 0022-2623.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199002
ED Entered STN: 19900328
Last Updated on STN: 19970203
Entered Medline: 19900222

L12 ANSWER 2 OF 13 MEDLINE
AN 76005891 MEDLINE
DN 76005891 PubMed ID: 1171879
TI C-**nucleoside** studies. Part II. Pentofuranosylethynes from **2,3-O-isopropylidene**-D-**ribose**.
AU Buchanan J G; Dunn A D; Edgar A R
SO JOURNAL OF THE CHEMICAL SOCIETY. PERKIN TRANSACTIONS 1, (1975) (13) 1191-200.
Journal code: 7505598. ISSN: 0300-922X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197511
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19751126

L12 ANSWER 3 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:365193 BIOSIS
DN BA94:47243
TI CONFORMATIONAL VARIABILITY IN MODIFIED **NUCLEOSIDES** CRYSTAL AND MOLECULAR STRUCTURE OF 2' 3'-O ISOPROPYLIDENE INOSINE.
AU MANDE S S; SHAMALA N; SESHADRI T P; VISWAMITRA M A
CS DEP. PHYSICS JAWAHARLAL NEHRU CENTRE ADVANCED SCIENTIFIC RESEARCH, INDIAN INST. SCI., BANGALORE-560 012, INDIA.
SO NUCLEOSIDES NUCLEOTIDES, (1992) 11 (5), 1103-1114.
CODEN: NUNUD5. ISSN: 0732-8311.
FS BA; OLD
LA English

L12 ANSWER 4 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1990:134340 BIOSIS
TI GROWTH INHIBITION AND INDUCTION OF CELLULAR DIFFERENTIATION OF HUMAN MYELOID LEUKEMIA CELLS IN CULTURE BY CARBAMOYL CONGENERS OF RIBAVIRIN.
AU SANGHVI Y S; BHATTACHARYA B K; KINI G D; MATSUMOTO S S; LARSON S B; JOLLEY W B; ROBINS R K; REVANKAR G R
CS ICI NUCLEIC ACID RES. INST., 330 HYLAND AVE., COSTA MESA, CALIF. 92626.
SO J MED CHEM, (1990) 33 (1), 336-344.
CODEN: JMCMAR. ISSN: 0022-2623.
FS BA; OLD
LA English

L12 ANSWER 5 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:182079 BIOSIS
DN BA85:94181
TI AN ALTERNATIVE TOTAL SYNTHETIC APPROACH TOWARD OCTOSYL ACID A.
AU KOZAKI S; SAKANAKA O; YASUDA T; SHIMIZU T; OGAWA S; SUAMI T
CS DEP. APPLIED CHEM., FAC. SCI. AND TECHNOL., KEIO UNIV., HIYOSHI, YOKOHAMA, 223 JAPAN.
SO J ORG CHEM, (1988) 53 (2), 281-286.
CODEN: JOCEAH. ISSN: 0022-3263.
FS BA; OLD
LA English

L12 ANSWER 6 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1979:211441 BIOSIS
DN BA68:13945
TI A NOVEL SYNTHESIS OF RIBAVIRIN AND RELATED **NUCLEOSIDES**.
AU WITKOWSKI J T; CHRISTENSEN L F; ROBINS R K
CS SCHERING CORP., BLOOMFIELD, N.J. 07003, USA.
SO J CARBOHYDR NUCLEOSIDES NUCLEOTIDES, (1978) 5 (4), 363-372.
CODEN: JCNNAF. ISSN: 0094-0585.
FS BA; OLD
LA English

L12 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 2000:331681 CAPLUS
TI Cyclonucleosides.
AU Brajeswar, Paul; Mayer, Bruce F.; Porter, Carl
CS Roswell Park Cancer Institute, Grace Cancer Drug Center, Buffalo, NY, 14263-0001, USA
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-079 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CLAC
DT Conference; Meeting Abstract
LA English

L12 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1997:630786 CAPLUS
DN 127:262997
TI Preparation of .beta.-C azanucleoside derivatives as glycosidase inhibitors
IN Yokoyama, Masataka; Togo, Hideo
PA Nihon Nohyaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09249664	A2	19970922	JP 1996-81019	19960309

OS CASREACT 127:262997; MARPAT 127:262997

L12 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1995:933758 CAPLUS
DN 124:146696
TI Stereoselective synthesis of 3-.beta.-D-ribofuranosylpyrazole from **2,3-O-isopropylidene**-D-**ribose**; a new route to pyrazole C-**nucleosides**
AU Rycroft, Anthony D.; Singh, Gurdial; Wightman, Richard H.
CS Sch. Science and Technology, Univ. Teesside, Middlesbrough, cleveland, TS1 3BA, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1995), (21), 2667-8
CODEN: JCPRB4; ISSN: 0300-922X
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 124:146696

L12 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1990:36356 CAPLUS
DN 112:36356
TI Growth inhibition and induction of cellular differentiation of human myeloid leukemia cells in culture by carbamoyl congeners of ribavirin
AU Sanghvi, Yogesh S.; Bhattacharya, Birendra K.; Kini, Ganesh D.; Matsumoto, Steven S.; Larson, Steven B.; Jolley, Weldon B.; Robins, Roland K.; Revankar, Ganapathi R.
CS ICN Nucleic Acid Res. Inst., Costa Mesa, CA, 92626, USA
SO Journal of Medicinal Chemistry (1990), 33(1), 336-44
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CASREACT 112:36356

L12 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1989:39297 CAPLUS
DN 110:39297
TI Synthesis of **nucleosides** using ketene dithioacetals
AU Yokoyama, Masataka; Kumata, Katsushi; Yamada, Naoyuki; Noro, Hidehiko; Sudo, Yuka
CS Fac. Sci., Chiba Univ., Chiba, 260, Japan
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1988), (8), 2309-13
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
OS CASREACT 110:39297

L12 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1979:168937 CAPLUS
DN 90:168937
TI 1,2,4-Triazole **nucleosides**
IN Christensen, Leon F.; Witkowski, Joseph T.
PA ICN Pharmaceuticals, Inc., USA

SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4138547	A	19790206	US 1977-863293	19771222

L12 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2002 ACS
AN 1975:514810 CAPLUS
DN 83:114810
TI C-**nucleoside** studies. II. Pentofuranosylethynes from **2,3-O-isopropylidene**-D-**ribose**
AU Buchanan, J. Grant; Dunn, Allan D.; Edgar, Alan R.
CS Dep. Chem., Heriot-Watt Univ., Edinburgh, Scot.
SO J. Chem. Soc., Perkin Trans. 1 (1975), (13), 1191-200
CODEN: JCPRB4
DT Journal
LA English

=> d l12 abs ibib 6

L12 ANSWER 6 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Ribavirin, (1-.beta.-D-ribofuranosyl-1,2,4-triazole 3-carboxamide) is a broad spectrum antiviral agent. Cyanoformidic acid hydrazide in ethanol containing a little formic acid was reacted with **2,3-O-isopropylidene**-D-**ribose** to give N1-(2,3-O-isopropylidene-D-ribofuranosyl)-cyanoformamidrazone (6). The structure 6 was confirmed by subsequent conversion to ribavirin.
ACCESSION NUMBER: 1979:211441 BIOSIS
DOCUMENT NUMBER: BA68:13945
TITLE: A NOVEL SYNTHESIS OF RIBAVIRIN AND RELATED **NUCLEOSIDES**.
AUTHOR(S): WITKOWSKI J T; CHRISTENSEN L F; ROBINS R K
CORPORATE SOURCE: SCHERING CORP., BLOOMFIELD, N.J. 07003, USA.
SOURCE: J CARBOHYDR NUCLEOSIDES NUCLEOTIDES, (1978) 5 (4), 363-372.
CODEN: JCNNAF. ISSN: 0094-0585.
FILE SEGMENT: BA; OLD
LANGUAGE: English

=> s l8 and ischemia?
L13 0 L8 AND ISCHEMIA?

=> s l8 and hypertension?
L14 0 L8 AND HYPERTENSION?

=> s l8 and adenosine?
L15 0 L8 AND ADENOSINE?

=> s l8 and adenine?
L16 0 L8 AND ADENINE?

=> s l8 and adenosine cyclic ketal
L17 0 L8 AND ADENOSINE CYCLIC KETAL

=> s adenosine

L18 272042 ADENOSINE

=> s l18 and cyclic(w)ketal?
L19 3 L18 AND CYCLIC(W) KETAL?

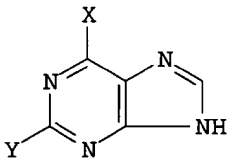
=> d l19 abs ibib 1-3

L19 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
AB The present invention includes a novel class of synthetic **adenosine** derivs. having clin. relevant and useful properties. These **adenosine cyclic ketal** compds. will be useful for treatment of a variety of conditions including, but not limited to, hypertension, vasodilation and ischemia.
ACCESSION NUMBER: 2002:778710 CAPLUS
DOCUMENT NUMBER: 137:273211
TITLE: **Adenosine cyclic ketals**: novel **adenosine** analogues for pharmacotherapy
INVENTOR(S): Jones, Garth S.; Jackson, Edwin K.
PATENT ASSIGNEE(S): University of Pittsburgh, USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002147174	A1	20021010	US 2001-828276	20010405

OTHER SOURCE(S): MARPAT 137:273211

L19 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
GI



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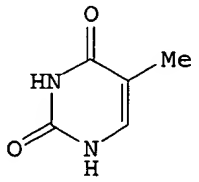

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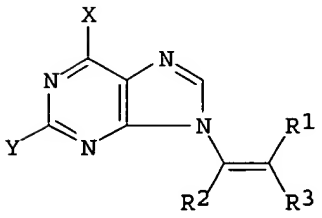
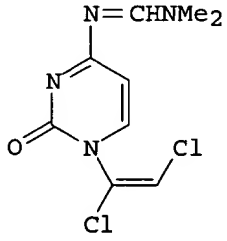


III



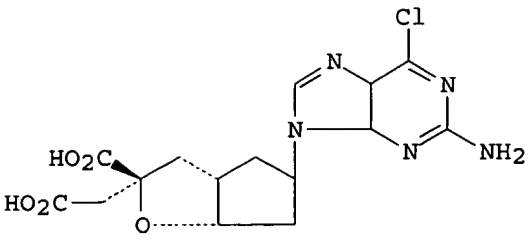
IV

AB Reactions of nucleic acid bases and related heterocycles 1-5 (I; e.g., X =

NH2, Y = H), 18 (II) and 22 with tetra-, tri- and dichloroethylenes, ClCR2:CR1R2 (6-9, e.g., R1 = R2 = R3 = Cl) in hexamethylphosphoric triamide gave the corresponding N-trichloro-, -dichloro- and -chloroenamines III: 11-17, 19, 20, 23 and 24 in high regioselectivity (N9 for purines and N1 for pyrimidines). Bases 1, 5, 18, 22 and trichloroethylene 7 gave the resp. E-dichloro enamines 15, 16, 20 and 24. Compds. 16 and 20 were identical with the products obtained by dichloro enamine 21 as the major product. The latter exists at room temp. as a mixt. of rotamers 28 and 29 (.DELTA.G.dbldag. .simeq. 18 kcal mol-1). The reaction of adenine 1 with (Z)-1,2- or 1,1-dichloroethylene 8 or 9 furnished Z-chloro enamine 17 whereas thymine 18 and tetrachloroethylene 6 in DMSO afforded a redn. product 20. Benzoylation of N9-(trichlorovinyl)adenine 11 gave N6,N6-dibenzoyl deriv. 26. The reaction of N1-(dichlorovinyl)cytosine 24 with N,N-dimethylformamide di-Me acetal afforded amidine 25 (IV). Interaction of (E)-N9-(dichlorovinyl)adenine 16 with sodium methoxide gave exclusively E-enamine 27 (III; X = NH2, Y = H, R1 = OMe, R2 = Cl, R3 = H). Trichloro enamines 11-14, 19, 23 and 26 were transformed to ynamines 30-35. Hydrogenation of compds. 30 and 35 furnished N9-ethyladenine 36 and N1-ethylthymine 37. Alkylation of ynamine 30 with acetone 38 gave only carbinol 41 whereas cyclohexanone 39 gave both compd. 43 and **cyclic ketal** 43. The reaction of ynamines 30 and 35 with ketone 40 afforded only ketals 44 and 45. The reaction of compd. 30 with N,N-dimethylformamide di-Me acetal led to N-dimethylaminomethylene deriv. 46. Ynamine 30 is a substrate for **adenosine** deaminase.

ACCESSION NUMBER: 1994:534064 CAPLUS
DOCUMENT NUMBER: 121:134064
TITLE: Synthesis, transformations and biological activity of chloro enamines and ynamines derived from chloroalkenyl- and alkynyl-N-substituted purine and pyrimidine bases of nucleic acids
AUTHOR(S): Joshi, Ramachandra V.; Xu, Ze-Qi; Ksebati, Mohamad B.; Kessel, David; Corbett, Thomas H.; Drach, John C.; Zemlicka, Jiri
CORPORATE SOURCE: Dep. Chem., Michigan Cancer Found, Detroit, MI, 48201, USA
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1994), (8), 1089-98
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 121:134064

L19 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
GI



I

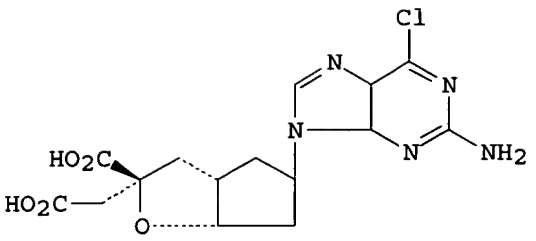
AB Synthetic analogs of the natural product griseolic acid in which a guanine base is substituted for the adenine have been prepd. The best of these compds. I inhibits a cyclic guanosine 3',5'-monophosphate (cGMP) phosphodiesterase prepn. with an IC50 of 0.34 .mu.M but is a very weak inhibitor of a cyclic **adenosine** 3',5'-monophosphate (cAMP) phosphodiesterase. An examn. of stereochem. factors indicates that the configuration of the carboxylic acids and the ring fusion in the inhibitors is important for potent cGMP PDE inhibition. PDE inhibition is not sensitive to the presence of the 2' or 4' oxygen atoms in the ribose, but inhibition is decreased when the 3' oxygen is removed. A selected group of analogs in which a monocarboxylic acid is present are poor inhibitors. The structure-activity relationship is consistent with the carboxylic acid functionality acting as a mimetic for the phosphate anion in cGMP and this concept is supported by a conformational anal. of two of the inhibitors.

ACCESSION NUMBER: 1993:428519 CAPLUS
DOCUMENT NUMBER: 119:28519
TITLE: Synthesis and phosphodiesterase activity of carboxylic acid mimetics of cyclic guanosine 3',5'-monophosphate
AUTHOR(S): Tulshian, Deen; Czarniecki, Michael; Doll, Ronald J.; Ahn, Ho Sam
CORPORATE SOURCE: Schering-Plough Res. Inst., Kenilworth, NJ, 07033, USA
SOURCE: Journal of Medicinal Chemistry (1993), 36(9), 1210-20
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English

=> s ribose and cyclic(w)ketal?
L20 2 RIBOSE AND CYCLIC(W) KETAL?

=> d l20 abs ibib 1-2

L20 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
GI



I

AB Synthetic analogs of the natural product griseolic acid in which a guanine base is substituted for the adenine have been prepd. The best of these compds. I inhibits a cyclic guanosine 3',5'-monophosphate (cGMP) phosphodiesterase prepn. with an IC50 of 0.34 .mu.M but is a very weak inhibitor of a cyclic adenosine 3',5'-monophosphate (cAMP) phosphodiesterase. An examn. of stereochem. factors indicates that the configuration of the carboxylic acids and the ring fusion in the inhibitors is important for potent cGMP PDE inhibition. PDE inhibition is not sensitive to the presence of the 2' or 4' oxygen atoms in the **ribose**, but inhibition is decreased when the 3' oxygen is removed. A selected group of analogs in which a monocarboxylic acid is present are poor inhibitors. The structure-activity relationship is consistent with the carboxylic acid functionality acting as a mimetic for the phosphate anion in cGMP and this concept is supported by a conformational anal. of two of the inhibitors.

ACCESSION NUMBER: 1993:428519 CAPLUS
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TITLE: Synthesis and phosphodiesterase activity of carboxylic acid mimetics of cyclic guanosine 3',5'-monophosphate
AUTHOR(S): Tulshian, Deen; Czarniecki, Michael; Doll, Ronald J.; Ahn, Ho Sam
CORPORATE SOURCE: Schering-Plough Res. Inst., Kenilworth, NJ, 07033, USA
SOURCE: Journal of Medicinal Chemistry (1993), 36(9), 1210-20
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English

L20 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

AB cf. C.A. 52, 19958f; 54, 3218d. The C-O bonds in the 1,3-dioxolane rings at C-5 and C-6 of 1,2:5,6-di-O-isopropylidene- (I) and 1,2:5,6-di-O-cyclohexylidene-D-glucofuranose (II) were cleaved by hydrogenolysis with copper chromite catalyst (III) in dioxane, but O-isopropylidene groups attached to the reducing center of a sugar mol. were not similarly hydrogenolyzed to O-isopropyl derivs. The 1,3-dioxolane ring of 1,6-anhydro-.beta.-D-glucopyranose (IV) was cleaved with simultaneous reductive fission of the C-2 OH group. I (150 g.) in 2.5 l. dioxane contg. 50 g. III shaken 6 hrs. at 200.degree./1000-1500 lb./sq. in. and the cooled filtered soln. evapd. to a sirup, crystd. from CHCl3-petr. ether (b. 30-60.degree.) and the mother liquor evapd., the amorphous residue (96 g.) heated 1 hr. at 100.degree. in 500 ml. 0.1N H2SO4 and the neutralized (BaCO3) hydrolyzate filtered, the filtrate evapd., and the sirup fractionated on cellulose gave 9.6 g. material (V), RRh 1.7, 7.8 g. compd. (VI), RRh 2.0, and 1.8 g. nonreducing materials which were not further examd. (RRh = distance on paper chromatogram relative to rhamnose, RRh = 1; 40:11:19 BuOH-EtOH-H2O and 500:50:1

C6H6-EtOH-H2O used for paper chromatograms and cellulose column fractionations, resp.; p-anisidine hydrochloride and ammoniacal AgNO3 used as developers). V recrystd. (MeOH-Et2O and Me2CO) gave authentic 6-O-isopropyl-D-glucose, [.alpha.]D 83.degree. .fwdarw. 47.degree.; phenylosazone m. 169-70.degree. (MeOH-C6H6), [.alpha.]D -107.degree. .fwdarw. 67.degree. (c 0.7, C5H5N); 1,2,3,4-tetra-O-acetyl deriv. m. 124-5.degree., [.alpha.]D 11.degree. (c 0.5, 2,4-lutidine). VI (2.60 g., [.alpha.]D -13.degree.) reduced 3 hrs. with 1.20 g. NaBH4 in 200 ml. H2O and excess reagent destroyed with AcOH, the soln. filtered through Amberlite IR-120 and evapd., the residue repeatedly evapd. from MeOH, and the sirup (2.10 g.) acetylated gave authentic penta-O-acetyl-6-O-isopropyl-L-iditol, m. 87-8.degree., [.alpha.]D -7.5.degree. (c 1.0, 2,4-lutidine). Under the same hydrogenolysis and hydrolysis conditions 25.0 g. II was converted to glucose and reducing materials and the mixt. extd. continuously by CHCl3 from H2O to give 0.90 g. impure material (VII), Rf 0.70, and on further extn. 0.53 g. slower moving compd. (VIII), Rf 0.58. Fractionation on a cellulose column gave further sepn. with an over-all yield of 1.4 and 2.4% VII and VIII, resp. The sirupy VII (144 mg.) in 10 ml. H2O contg. 30 mg. NaBH4 kept 3 hrs. and the mixt. worked up gave 122 mg. sirup, crystd. from Me2 CO to give 6-O-cyclohexyl-L-iditol, m. 78-80.degree., [.alpha.]D -5.degree. (c 1.1, satd. borax soln.). Recrystn. of VIII from Me2CO gave 6-O-cyclohexyl-D-glucose, m. 115-17.degree., [.alpha.]D 60.degree. .fwdarw. 45.degree. (C 1.0, H2O). The cleavage of a 1,3-dioxolane ring was not surprising since some types of furan rings could be broken readily under similar hydrogenation conditions. The inversion of con figuration of OH groups on C atoms was a common feature of the action of III and Raney Ni on carbohydrates under hydrogenation conditions. A similar type of reaction occurred when IV was hydrogenolyzed at 180.degree.. IV (3 g.) in 150 ml. dioxane contg. 1.0 g. III hydrogenated 6 hrs. at 180.degree./1000-1500 lb./sq. in. and the filtered soln. evapd., the sirup (2.62 g.) fractionated on a cellulose column, and the component, RRh 1.4 (0.14 g.) recrystd. (EtOAc) gave authentic dihydro-D-altral, m. 105-6.degree., [.alpha.]D 73.degree. (c 0.8, H2O). The component, RRh 1.3, (0.39 g.) recrystd. (EtOAc) yielded dihydro-D-glucal, m. 87-8.degree., [.alpha.]D 19.degree. (C 1.0, H2O). A further component (0.55 g.) contg. compds. with RRh 1.1 and 1.3 was isolated but no 1,5-anhydro-D-glucitol was detected in any fraction. The 1,6-O-linkage in IV was cleaved at the C-1 O bond with redn. of the C-2 OH group. Hydrogenolysis of 1,2-ketals was not detected with 1,2-O-isopropylidene-D-glucofuranose or I. Lack of reactivity was shown further by using 1,2-O-isopropylidene-D-fructopyranose (IX) and 1,2-O-isopropylidene-D-xylofuranose (X) as substrates. In none of these instances were any derived 2-O-isopropyl polyols or isopropyl glycosides, formed by C-O bond scission, detected. IX (14.0 g.) in 250 ml. dioxane contg. 3.0 g. III hydrogenated 6 hrs. at 180.degree./100-135 atm. and the filtered soln. evapd., the sirup (12.7 g.) hydrolyzed 30 min. at 100.degree. in 30 ml. 0.1N H2SO4, and the filtered, neutralized (BaCO3) hydrolyzate evapd. yielded a sirup contg. fructose and 2 other ketohexoses as shown chromatographically with urea oxalate spray. X (5.1 g.) hydrogenated at 200.degree. yielded 3.7 g. sirup, which furnished a mixt. of 58% D-xylose and 42% **ribose** on further hydrolysis. Extensive inversion at C-3 occurred. To identify the hydrogenolysis products from I

and II the cryst. reference compds., 6-O-isopropyl-D-glucose (XI), 6-O-cyclohexyl-D-glucose (XII), penta-O-acetyl-6-O-isopropyl-L-iditol (XIII) and 6-O-cyclohexyl-L-iditol (XIV) were synthesized. Iso-PrOH (40 ml.) contg. 0.79 g. Na refluxed 18 hrs. with 3.83 g. 3-O-benzyl-1,2-O-isopropylidene-6-O-p-tolylsulfonyl-D-glucofuranose (XV) (C.A. 40, 31005) and the soln. dild. with C6H6, washed 3 times with H2O, and the dried soln. evapd. gave 2.32 g. sirup, [.alpha.]D -16.degree. (c 1.4, alc.) contg. 3-O-benzyl-6-O-isopropyl-1,2-O-isopropylidene-D-glucofuranose. The product (1.16 g.) in 50 ml. MeOH debenzylated 4 hrs. at 70.degree./100 atm. over Raney Ni and the filtered soln. evapd. yielded 0.67 g. sirup, [.alpha.]D -14.degree. (c 1.9, alc.), hydrolyzed (0.48 g.) 30 min. at 100.degree. in 0.1N HCl and the soln. neutralized (Ag2CO3), the filtered soln. evapd. and the sirup freed from glucose by dissoln. in Me2CO and addn. of a large excess of boiling Et2O, the liquid decanted and evapd. to a small vol., filtered, and the product recrystd. to give XI, m. 126-8.degree., [.alpha.], 90.degree. .fwdarw. 50.degree. (c 0.5, H2O). K (0.80 g.) in 40 ml. 50% cyclohexanol in dioxane heated 18 hrs. at 100.degree. with 2.42 g. XV and the mixt. dild. with C6H6, extd. 3 times with H2O, and evapd. yielded 1.61 g. 3-O-benzyl-6-O-cyclohexyl-1,2-O-isopropylidene-D-glucofuranose, [.alpha.]D -18.degree. (c 1.4, MeOH). The product (0.82 g.) hydrogenated to 0.52 g. sirupy 6-O-cyclohexyl-1,2-O-isopropylidene-D-glucofuranose, [.alpha.]D -23.degree. (c 2.2, alc.), hydrolyzed with acid and purified by Et2O extn. to yield 0.18 g. XII, m. 116-17.degree. (Me2CO), [.alpha.]D 66.degree. .fwdarw. 37.degree. (c 0.7, H2O). C5H5N (6 ml.) contg. 2.60 g. 1,2:3,4-di-O-isopropylidene-L-iditol (C.A. 41, 2697h) treated with 1.90 g. p-MeC6H4SO2Cl in 6 ml. C6H6 and kept 3 hrs., treated with 0.1 ml. H2O and dild. with C6H6, the soln. washed successively with dil. H2SO4, aq. NaHCO3, and H2O, and evapd. yielded 3.74 g. 1,2: 3,4-di-O-isopropylidene-6-O-p-tolylsulfonyl-L-iditol (XVI), [.alpha.]D 1.degree. (c 2.2, alc.). The tosyl compd. (0.94 g.) refluxed 18 hrs. in 30 ml. iso-PrOH contg. 0.20 g. Na and dild. with C6H6, the soln. washed 3 times with H2O and evapd., the sirup [0.49 g., [.alpha.]D 12.degree. (c 2.4, alc.)] hydrolyzed 30 min. at 100.degree. in 5 ml. 0.1N H2SO4 and neutralized (Ba-CO3), the soln. filtered, and evapd. gave 0.32 g. complex mixt. contg. mainly a product, RRh 1.7, and components moving at the speeds of rhamnose, **ribose**, and glucose. The mixt. (92 mg.) acetylated and the sirupy product crystd. (Et2O-petr. ether and dil. MeOH) gave 49 mg. XIII, m. 87-8.degree., [.alpha.]D -5.degree. (c 1.0, 2,4-lutidine). Deacetylation yielded a polyol, RRh 1.7. XVI (8 g.) heated 18 hrs. at 100.degree. in 100 ml. dioxane and 100 ml. cyclohexanol contg. 3.0 g. K and the mixt. evapd., the residual soln. neutralized with 6N HCl and acidified with 100 ml. 0.1N HCl in 200 ml. alc., the soln. refluxed 2 hrs. to remove the isopropylidene groups and neutralized with Ag2CO3, the filtered soln. evapd. and taken up in H2O, the liquid shaken with petr. ether and the aq. layer evapd., extd. with hot Me2CO, and the sirup (1.82 g.) recrystd. (Me2CO-Et2O and Me2CO) yielded XIV, m. 80-1.degree., [.alpha.]D -7.5.degree. (C 1.0, satd. borax). D-Altrose (22 g.) heated 1 hr. at 100.degree. in 100 ml. Ac2O contg. 10 g. NaOAc and the mixt. added with stirring to ice H2O, kept 3 hrs. and extd. with C6H6, the ext. washed 3 times with H2O, and evapd. gave 27 g. pentaacetate. The sirup taken up in 250 ml. CHCl3, kept 6 hrs. at room temp. with 250 ml. AcOH satd. with HBr and added with stirring to ice H2O, the washed and

dried CHCl3 layer filtered, and evapd. gave 26 g. sirupy crude 2,3,4,6-tetra-O-acetyl-D-altrosyl bromide. The sirup in 60 ml. AcOH stirred at -5.degree. with 60 ml. AcOH and 120 ml. H2O contg. 28 g. Zn dust and the mixt. warmed to 20.degree., stirred overnight and extd. with C6H6, the ext. washed 3 times with H2O, and evapd. gave 4.1 g. sirupy 3,4,6-tri-O-acetyl-D-altral. The sirup hydrogenated 3 hrs. in 25 ml. MeOH with 100 mg. PtO2 at 20.degree./1 atm. and the mixt. kept 2 hrs. with 100 mg. Na, the deacetylated product evapd., and the sirup (1.96 g.) fractionated on cellulose gave 80 mg. material, crystd. (EtOAc) to give authentic dihydro-D-altral, m. 105-6.degree., [.alpha.]D 72.degree. (c 0.9, H2O).

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DOCUMENT NUMBER: 54:38817
ORIGINAL REFERENCE NO.: 54:7565i,7566a-i,7567a-h
TITLE: Hydrogenolysis of carbohydrates. VI. **Cyclic ketals** and related compounds
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CORPORATE SOURCE: Prairie Regional Lab., Saskatoon, Can.
SOURCE: J. Org. Chem. (1959), 24, 49-53
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

=> s ribose and adenosine?
L21 8906 RIBOSE AND ADENOSINE?

=> s l21 and cyclic(w)ketals?
L22 0 L21 AND CYCLIC(W) KETALS?

=> s l21 and isopropylidene?
L23 76 L21 AND ISOPROPYLIDENE?

=> d l23 1-76

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EM 200007
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L23 ANSWER 2 OF 76 MEDLINE
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DN 95131423 PubMed ID: 7830282
TI Specific inhibition of poly(ADP-**ribose**) glycohydrolase by **adenosine** diphosphate (hydroxymethyl)pyrrolidinediol.
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CS Department of Medicinal and Biological Chemistry, University of Toledo, Ohio 43606.
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AN 1995:106266 BIOSIS
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TI Specific inhibition of poly (ADP-**ribose**) glycohydrolase by **adenosine** diphosphate (Hydroxymethyl) pyrrolidinediol.
AU Slama, James T. (1); Aboul-Ela, Nasreen; Goli, Deepa M.; Cheesman, Bruce

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CS (1) Dep. Medicinal Biol. Chem., Coll. Pharm., Univ. Toledo, 2801 Bancroft St.-320, Toledo, OH 43606 USA
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002070532	A2	20020912	WO 2002-IL160	20020303
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	GB 2372742	A1	20020904	GB 2001-5337	20010303
PRAI	GB 2001-5337	A	20010303		

OS MARPAT 137:217179

L23 ANSWER 21 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 2002:186249 CAPLUS
TI Stereocontrolled synthesis of sugar-modified diene analogues of **adenosine** and uridine via Stille coupling
AU Wnuk, Stanislaw F.; Sacasa, Pablo R.; Lewandowska, Elzbieta
CS Department of Chemistry, Florida International University, Miami, FL, 33199, USA
SO Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), CARB-004 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CKQP
DT Conference; Meeting Abstract
LA English

L23 ANSWER 22 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 2001:197745 CAPLUS
TI Regio- and stereoselective tritium labeling of carbohydrates and nucleosides
AU Saljoughian, Manouchehr; Morimoto, Hiromi; Than, Chit; Williams, Philip G.
CS Division of Physical Biosciences, LBNL, University of California, Berkeley, CA, 94720, USA
SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, CARB-090
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English

L23 ANSWER 23 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1998:138692 CAPLUS
TI Synthesis of methylenebis(phosphonate) analogs of cyclic ADP-**ribose**
AU Pankiewicz, Krzysztof W.; Lesiak, Krystyna
CS Codon Pharmaceuticals, Gaithersburg, MD, 20877, USA
SO Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), CARB-006 Publisher: American Chemical Society, Washington, D. C.
CODEN: 65QTAA
DT Conference; Meeting Abstract
LA English

L23 ANSWER 24 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1998:26074 CAPLUS
DN 128:115185
TI An efficient synthesis of enantiomeric ribonucleic acids from D-glucose
AU Pitsch, Stefan
CS Organisch-Chemisches Laboratorium, Eidgenoessische Technische Hochschule, Zurich, CH-8092, Switz.
SO Helvetica Chimica Acta (1997), 80(8), 2286-2314
CODEN: HCACAV; ISSN: 0018-019X
PB Verlag Helvetica Chimica Acta AG
DT Journal
LA English
OS CASREACT 128:115185

L23 ANSWER 25 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1996:705588 CAPLUS
DN 125:329266
TI Removal of Acetal, Silyl, and 4,4'-Dimethoxytrityl Protecting Groups from Hydroxyl Functions of Carbohydrates and Nucleosides with Clay in Aqueous

Methanol
AU Asakura, Jun-ichi; Robins, Morris J.; Asaka, Yukihiro; Kim, Tong Hei
CS School of Medicine, Kinki University, Osaka, 589, Japan
SO Journal of Organic Chemistry (1996), 61(25), 9026-9027
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 125:329266

L23 ANSWER 26 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1996:414744 CAPLUS
TI Synthesis and biological evaluation of clitocine analogs as **adenosine** kinase inhibitors.
AU Lee, Chih-Hung; Jiang, Meiqun; Daanen, Jerry; Kohlaas, Kathy L.; Alexander, Karen M.; Yu, Haixia; Kowaluk, Elizabeth A.; Bhagwat, Shripad S.
CS Abbott Laboratories, Neuroscience Research, Abbott Park, IL, 60064-3500, USA
SO Book of Abstracts, 212th ACS National Meeting, Orlando, FL, August 25-29 (1996), MEDI-156 Publisher: American Chemical Society, Washington, D. C.
CODEN: 63BFAF
DT Conference; Meeting Abstract
LA English

L23 ANSWER 27 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1996:155394 CAPLUS
DN 124:317758
TI Clay catalyzed acetonation: a simple method for the preparation of **isopropylidene** carbohydrates
AU Asakura, Jun-ichi; Matsubara, Yoshio; Yoshihara, Masakuni
CS Dep. Biochem., Kinki Univ. Sch. Med., Osaka, 589, Japan
SO Journal of Carbohydrate Chemistry (1996), 15(2), 231-9
CODEN: JCACDM; ISSN: 0732-8303
PB Dekker
DT Journal
LA English
OS CASREACT 124:317758

L23 ANSWER 28 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1995:590191 CAPLUS
DN 123:52110
TI Structure-activity relationship for the binding of nucleoside ligands to **adenosine** kinase from Toxoplasma gondii
AU Iltzsch, Max H.; Uber, Sheri S.; Tankersley, Kevin O.; el Kouni, Mahmoud H.
CS Dept. Biol. Sci., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SO Biochemical Pharmacology (1995), 49(10), 1501-12
CODEN: BCPCA6; ISSN: 0006-2952
PB Elsevier
DT Journal
LA English

L23 ANSWER 29 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1995:297966 CAPLUS
DN 122:100325
TI Specific Inhibition of Poly(ADP-**ribose**) Glycohydrolase by **Adenosine** Diphosphate (Hydroxymethyl)pyrrolidinediol
AU Slama, James T.; Aboul-Ela, Nasreen; Goli, Deepa M.; Cheesman, Bruce V.; Simmons, Anne M.; Jacobson, Myron K.

CS Department of Medicinal and Biological Chemistry, University of Toledo, Toledo, OH, 43606, USA
SO Journal of Medicinal Chemistry (1995), 38(2), 389-93
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English

L23 ANSWER 30 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1994:549280 CAPLUS
DN 121:149280
TI Comparative studies on the affinities of ATP derivatives for P2X-purinoceptors in rat urinary bladder
AU Bo, Xuenong; Fischer, Bilha; Maillard, Michel; Jacobson, Kenneth A.; Burnstock, Geoffrey
CS Dep. Anat. Dev. Biol., Univ. College London, London, WC1E 6BT, UK
SO British Journal of Pharmacology (1994), 112(4), 1151-9
CODEN: BJPCBM; ISSN: 0007-1188
DT Journal
LA English

L23 ANSWER 31 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1994:289456 CAPLUS
DN 120:289456
TI Structure activity relationships for derivatives of **adenosine** -5'-triphosphate as agonists at P2 purinoceptors: heterogeneity within P2x and P2Y subtypes
AU Brunstock, Geoffrey; Fischer, Bilha; Hoyle, Charles H. V.; Maillard, Michel; Ziganshin, Airat U.; Brizzolara, Antonia L.; von Isakovics, Amy; Boyer, Jose L.; Harden, Kendall; Jacobson, Kenneth A.
CS Lab. Bioorg. Chem., Natl. Inst. Diabetes and Digestive and Kidney Dis., Bethesda, MD, USA
SO Drug Development Research (1994), 31(3), 206-19
CODEN: DDREDK; ISSN: 0272-4391
DT Journal
LA English

L23 ANSWER 32 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1993:534108 CAPLUS
DN 119:134108
TI Effect of substituent **ribose** of **adenosine** analogs on binding to the **adenosine** deaminase in the scallop (Patinopecten yessoensis) midgut gland
AU Yoshida, Shinya; Aikawa, Toyoo
CS Fac. Sci., Niigata Univ., Niigata, 950-21, Japan
SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (1993), 105B(1), 63-7
CODEN: CBPBB8; ISSN: 0305-0491
DT Journal
LA English

L23 ANSWER 33 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1990:552950 CAPLUS
DN 113:152950
TI 13C-Enriched ribonucleosides: synthesis and application of 13C-1H and 13C-13C spin-coupling constants to assess furanose and N-glycoside bond conformations
AU Kline, Paul C.; Serianni, Anthony S.

CS Dep. Chem. Biochem., Univ. Notre Dame, Notre Dame, IN, 46556, USA
SO Journal of the American Chemical Society (1990), 112(20), 7373-81
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

L23 ANSWER 34 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1989:24223 CAPLUS
DN 110:24223
TI Conformational analysis of 8-substituted **isopropylidene** derivatives of **adenosine**-5'-carboxylic acid
AU Timoshchuk, V. A.; Ermolenko, T. M.; Akhrem, A. A.
CS Beloruss. Inst. Epidemiol. Mikrobiol., Minsk, USSR
SO Zhurnal Organicheskoi Khimii (1988), 24(6), 1214-20
CODEN: ZORKAE; ISSN: 0514-7492
DT Journal
LA Russian

L23 ANSWER 35 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1987:632101 CAPLUS
DN 107:232101
TI Kinetic characteristics and binding process of substrate analogs to the **adenosine** deaminase in the marine mussel, Mytilus edulis
AU Ogawa, Tetsuo; Aikawa, Yoko; Aikawa, Toyoo
CS Fac. Sci., Niigata Univ., Niigata, 950-21, Japan
SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (1987), 88B(1), 91-100
CODEN: CBPBB8; ISSN: 0305-0491
DT Journal
LA English

L23 ANSWER 36 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1986:627209 CAPLUS
DN 105:227209
TI Mechanisms for the solvolytic decompositions of nucleoside analogs. 13. Reactions of adenine nucleosides with aqueous alkalies: kinetics and mechanism
AU Lehikoinen, Pertti; Mattinen, Jorma; Lonnberg, Harri
CS Dep. Chem. Biochem., Univ. Turku, Turku, SF-20500, Finland
SO Journal of Organic Chemistry (1986), 51(20), 3819-23
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English

L23 ANSWER 37 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1986:439931 CAPLUS
DN 105:39931
TI Comparative study of 2',3'-O-**isopropylideneadenosine** and **adenosine** transformations in rat liver homogenates
AU Golovatskii, I. D.; Petlichnaya, L. I.
CS A. V. Palladin Inst. Biochem., Lvov, USSR
SO Ukrainskii Biokhimicheskii Zhurnal (1978-1999) (1986), 58(3), 37-40
CODEN: UBZHD4; ISSN: 0201-8470
DT Journal
LA Russian

L23 ANSWER 38 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1986:182604 CAPLUS
DN 104:182604

TI Production of anti-(ADP-**ribose**) antibodies with the aid of a dinucleotide-pyrophosphatase-resistant hapten and their application for the detection of mono(ADP-ribosyl)ated polypeptides
AU Meyer, Thomas; Hilz, Helmuth
CS Inst. Physiol. Chem., Univ. Hamburg, Hamburg, D-2000/20, Fed. Rep. Ger.
SO European Journal of Biochemistry (1986), 155(1), 157-65
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English

L23 ANSWER 39 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1984:187891 CAPLUS
DN 100:187891
TI NAD[S], an NAD analog with reduced susceptibility to phosphodiesterase. Chemical synthesis and enzymic properties
AU Meyer, Thomas; Wielckens, Klaus; Thiem, Joachim; Hilz, Helmuth
CS Inst. Physiol. Chem., Univ. Hamburg, Hamburg, Fed. Rep. Ger.
SO European Journal of Biochemistry (1984), 140(3), 531-7
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English

L23 ANSWER 40 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1983:454117 CAPLUS
DN 99:54117
TI Synthesis, structure, and reactivity of selenoxides derived from **ribose** and **adenosine**: new method for access to C(4')-C(5') unsaturated ribofuranosides
AU Boullais, C.; Zylber, N.; Zylber, J.; Guilhem, J.; Gaudemer, A.
CS Groupe Rech., CNRS, Thiais, 94320, Fr.
SO Tetrahedron (1983), 39(5), 759-65
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA French

L23 ANSWER 41 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1982:424149 CAPLUS
DN 97:24149
TI Bis(**isopropylidene adenosine**) - a novel base-stacked dinucleoside with two deamination sites for **adenosine** deaminase
AU Seela, Frank; Ott, Johann
CS Fachber. Naturwiss., Univ. Paderborn, Paderborn, D-4790, Fed. Rep. Ger.
SO Bioorg. Chem. (1982), 11(1), 24-31
CODEN: BOCMBM; ISSN: 0045-2068
DT Journal
LA English

L23 ANSWER 42 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1979:121939 CAPLUS
DN 90:121939
TI Intramolecular hydrogen bonding and conformation of 2-alkylthio-2',3'-O-**isopropylidene adenosines**
AU Higuchi, Shigesada; Kikugawa, Kiyomi
CS Mitsubishi-Kasei Inst. Life Sci., Tokyo, Japan
SO Nucleic Acids Res., Spec. Publ. (1978), 5(Symp. Nucleic Acids Chem., 6th), 367-70
CODEN: NARPD6; ISSN: 0309-1872
DT Journal
LA English

L23 ANSWER 43 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1978:572144 CAPLUS
DN 89:172144
TI The crystal structure and conformation of 2',3'-O-**isopropylideneadenosine**: the co-existence of a planar and a puckered ribofuranose ring
AU Sprang, Stephen; Rohrer, D. C.; Sundaralingam, M.
CS Coll. Agric. Life Sci., Univ. Wisconsin, Madison, Wis., USA
SO Acta Crystallogr., Sect. B (1978), B34(9), 2803-10
CODEN: ACBCAR; ISSN: 0567-7408
DT Journal
LA English

L23 ANSWER 44 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1978:547169 CAPLUS
DN 89:147169
TI Partial protection of carbohydrate derivatives. Part II. Acetalation of some sugar derivatives by enol acetates with catalysis by boron trifluoride-red mercuric oxide
AU Araki, Younosuke; Hijioka, Yoshito; Ishido, Yoshiharu; Sato, Tetsuo
CS Fac. Sci., Tokyo Inst. Technol., Tokyo, Japan
SO Carbohydr. Res. (1978), 64, 309-14
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English

L23 ANSWER 45 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1977:552496 CAPLUS
DN 87:152496
TI **Adenosine**-5'-d: rotational conformation of the 5'-carbinol group
AU Ritchie, R. George S.; Perlin, Arthur S.
CS Dep. Chem., McGill Univ., Montreal, Que., Can.
SO Carbohydr. Res. (1977), 55, 121-8
CODEN: CRBRAT
DT Journal
LA English

L23 ANSWER 46 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1977:73042 CAPLUS
DN 86:73042
TI Simple models of nucleic acid interactions. 1. Base-base interactions in
1,2-di(adenosin-N6-yl)ethane and 1,4-di(adenosin-N6-yl)butane
AU Zemlicka, Jiri; Owens, James
CS Michigan Cancer Found., Detroit, Mich., USA
SO J. Org. Chem. (1977), 42(3), 517-23
CODEN: JOCEAH
DT Journal
LA English

L23 ANSWER 47 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1976:572201 CAPLUS
DN 85:172201
TI Design of substrate-site-directed inhibitors of adenylate kinase and hexokinase. Effect of substrate substituents on affinity for the adenine nucleotide sites
AU Hampton, Alexander; Slotin, Lewis A.; Kappler, Francis; Sasaki, Takuma; Perini, Florian

CS Inst. Cancer Res., Fox Chase Cancer Cent., Philadelphia, Pa., USA
SO J. Med. Chem. (1976), 19(12), 1371-7
CODEN: JMCMAR
DT Journal
LA English

L23 ANSWER 48 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1975:559349 CAPLUS
DN 83:159349
TI Purine nucleoside conformational analysis. Applications of the nuclear Overhauser effect
AU Hart, P. A.; Davis, J. P.
CS Sch. Pharm., Univ. Wisconsin, Madison, WI, USA
SO Jerusalem Symp. Quantum Chem. Biochem. (1973), 5(Conform. Biol. Mol. Polym., Proc. Int. Symp., 1972), 297-310
CODEN: JSQCA7
DT Journal
LA English

L23 ANSWER 49 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1975:547674 CAPLUS
DN 83:147674
TI Preparation of a substituted 3-acetamido-3-deoxy-D-ribofuranosyl bromide suitable for the synthesis of puromycin analogs
AU El Khadem, Hassan S.; Audichya, Thakur D.; El Ashry, El Sayed H.; Sindric, Ronald
CS Dep. Chem. Chem. Eng., Michigan Technol. Univ., Houghton, Mich., USA
SO Carbohydr. Res. (1975), 41 318-22
CODEN: CRBRAT
DT Journal
LA English

L23 ANSWER 50 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1975:514789 CAPLUS
DN 83:114789
TI Deuterium substitution effect on relaxation times (DESERT) and its application to the study of conformation of some purine nucleoside derivatives
AU Akasaka, K.; Imoto, T.; Shibata, S.; Hatano, H.
CS Fac. Sci., Kyoto Univ., Kyoto, Japan
SO J. Magn. Reson. (1975), 18(2), 328-43
CODEN: JOMRA4
DT Journal
LA English

L23 ANSWER 51 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1975:418497 CAPLUS
DN 83:18497
TI Simulation of all-proton relaxation curves as a means to elucidate molecular conformation in solution
AU Akasaka, K.; Shibata, S.; Imoto, T.; Hatano, H.
CS Fac. Sci., Kyoto Univ., Kyoto, Japan
SO J. Magn. Reson. (1975), 17(3), 413-16
CODEN: JOMRA4
DT Journal
LA English

L23 ANSWER 52 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1975:156612 CAPLUS

DN 82:156612
TI **Ribose** conformations in the common purine(.beta.)ribosides, in some antibiotic nucleosides, and in some **isopropylidene** derivatives. Comparison
AU Westhof, Eric; Roeder, Oskar; Croneiss, Ingrid; Luedemann, Hans D.
CS Inst. Biophys Phys. Biochem., Univ. Regensburg, Regensburg, Ger.
SO Z. Naturforsch., Teil C (1975), 30c(3-4), 131-40
CODEN: ZNFCAP
DT Journal
LA English

L23 ANSWER 53 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1973:546787 CAPLUS
DN 79:146787
TI Deuterium substitution effect on proton relaxation times as a direct means for elucidating molecular interaction in solution. Application to 2',3'-**isopropylideneadenosine**
AU Akasaka, Kazuyuki; Imoto, Toshiaki; Hatano, Hiroyuki
CS Fac. Sci., Kyoto Univ., Kyoto, Japan
SO Chem. Phys. Lett. (1973), 21(2), 398-400
CODEN: CHPLBC
DT Journal
LA English

L23 ANSWER 54 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1973:537428 CAPLUS
DN 79:137428
TI Conformation of substituted benzylidene and **isopropylidene** nucleosides
AU Belikova, A. M.; Grineva, N. I.; Kabashea, G. N.
CS Inst. Org. Chem., Novosibirsk, USSR
SO Tetrahedron (1973), 29(15), 2277-83
CODEN: TETRAB
DT Journal
LA English

L23 ANSWER 55 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1973:463102 CAPLUS
DN 79:63102
TI 4'-Thioadenosine 3',5'-cyclic phosphate and derivatives. Chemical synthesis and hydrolysis by phosphodiesterase
AU Anisuzzaman, A. K. M.; Lake, William C.; Whistler, Roy L.
CS Dep. Biochem., Purdue Univ., Lafayette, Indiana, USA
SO Biochemistry (1973), 12(11), 2041-5
CODEN: BICHAW
DT Journal
LA English

L23 ANSWER 56 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1972:109335 CAPLUS
DN 76:109335
TI Synthetic spectroscopic models related to coenzymes and base pairs. Abbreviated nicotinamide adenine dinucleotide. VIII
AU Secrist, John A., III; Leonard, Nelson J.
CS Sch. Chem. Sci., Univ. Illinois, Urbana, Ill., USA
SO J. Amer. Chem. Soc. (1972), 94(5), 1702-6
CODEN: JACSAT
DT Journal
LA English

L23 ANSWER 57 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1971:112362 CAPLUS
DN 74:112362
TI Nucleosides and nucleotides. XLV. Purine cyclonucleosides. 12. Synthesis of adenine cyclonucleosides having 8,5'-O-anhydro linkage
AU Ikehara, Morio; Kaneko, Masakatsu; Okano, R.
CS Fac. Pharm. Sci., Osaka Univ., Osaka, Japan
SO Tetrahedron (1970), 26(24), 5675-82
CODEN: TETRAB
DT Journal
LA English

L23 ANSWER 58 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1970:101043 CAPLUS
DN 72:101043
TI Preparation and coupling of polypeptides of 5'-O-carboxymethyl ribonucleosides
AU Coat, Jean P.; David, Serge
CS Lab. Rech. Chim. Composes Biol., Fac. Sci., Orsay, Fr.
SO Carbohyd. Res. (1970), 12(3), 335-46
CODEN: CRBRAT
DT Journal
LA French

L23 ANSWER 59 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1970:90797 CAPLUS
DN 72:90797
TI Synthesis of **ribose** and of adenine nucleotides containing oxygen-18
AU Follmann, Hartmut; Hogenkamp, H. P. C.
CS Coll. of Med., Univ. of Iowa, Iowa City, Iowa, USA
SO J. Amer. Chem. Soc. (1970), 92(3), 671-7
CODEN: JACSAT
DT Journal
LA English

L23 ANSWER 60 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1969:413310 CAPLUS
DN 71:13310
TI Nonglycosidic analogs of nucleosides. II. 6-Amino-9-(2'-tetrahydrofurylmethylene)purine and 6-amino-9-(2', 5'-anhydro-D-ribityl)purine
AU Defaye, Jacques; Reyners, Thierry
CS Inst. Chim. Subst. Nat., C.N.R.S., Gif-sur-Yvette, Fr.
SO Bull. Soc. Chim. Biol. (1968), 50(10), 1625-35
CODEN: BSCIA3
DT Journal
LA French

L23 ANSWER 61 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1969:115465 CAPLUS
DN 70:115465
TI Electronic properties of N-heteroaromatics. XXIX. Solubilization of purine nucleosides by a borate and its mechanism
AU Okano, Teisuku; Komatsu, Toyohiko; Nara, Takeshi; Tsuji, Kazuyuki
CS Sch. Med., Tohoku Univ., Sendai, Japan
SO Yakugaku Zasshi (1969), 89(1), 51-7
CODEN: YKKZAJ
DT Journal

LA English

L23 ANSWER 62 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1969:38035 CAPLUS
DN 70:38035
TI Derivatives of 3-alkyl ribofuranosides
IN Walton, Edward
PA Merck and Co., Inc.
SO Fr., 9 pp.
CODEN: FRXXAK
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1498856		19671020		
PRAI US		19651115		

L23 ANSWER 63 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1967:482358 CAPLUS
DN 67:82358
TI Nonglycosidic analogs of nucleosides. I. 6-(2',5'-Anhydro-D-ribitylamino)purine
AU Cleophax, Janine; Defaye, Jacques; Gero, Stephan D.
CS CNRS, Gif-sur-Yvette, Ssonne, Fr.
SO Bull. Soc. Chim. Fr. (1967), (1), 104-7
CODEN: BSCFAS
DT Journal
LA French

L23 ANSWER 64 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1967:417866 CAPLUS
DN 67:17866
TI Interaction between synthetic ATP analogs and actomyosin systems. IV
AU Tonomura, Yuji; Imamura, Kiichi; Ikehara, Morio; Uno, Hitoshi; Harada, Fumio
CS Osaka Univ., Osaka, Japan
SO J. Biochem. (Tokyo) (1967), 61(4), 460-72
CODEN: JOBIAO
DT Journal
LA English

L23 ANSWER 65 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1965:411280 CAPLUS
DN 63:11280
OREF 63:2030b-d
TI Interaction between synthetic **adenosine** triphosphate analogs and actomyosin systems. III
AU Ikehara, Morio; Ohtsuka, Eiko; Uno, Hitoshi; Imamura, Kiichi; Tonomura, Yuji
CS Hokkaido Univ., Sapporo, Japan
SO Biochim. Biophys. Acta (1965), 100(2), 471-8
DT Journal
LA English

L23 ANSWER 66 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1965:29883 CAPLUS
DN 62:29883
OREF 62:5325e-h
TI Synthesis of 4-thio-D- and -L-ribofuranose and the corresponding adenine

nucleosides
AU Reist, Elmer J.; Gueffroy, Donald E.; Goodman, Leon
CS Stanford Res. Inst., Menlo Park, CA
SO J. Am. Chem. Soc. (1964), 86(24), 5658-63
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

L23 ANSWER 67 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1965:3283 CAPLUS
DN 62:3283
OREF 62:626e-f
TI Synthesis of phosphonites and phosphinites of nucleosides
AU Nifant'ev, E. E.; Markov, S. M.; Tuseev, A. P.
SO Zh. Obshsh. Khim. (1964), 34(9), 3126
DT Journal
LA Russian

L23 ANSWER 68 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1964:480678 CAPLUS
DN 61:80678
OREF 61:14044g-h,14045a
TI Infrared spectra of nucleoside and nucleotide derivatives of adenine and cytosine
AU Silaeva, S. A.; Kazitsyna, L. A.; Prokof'ev, M. A.
CS State Univ., Moscow
SO Vestn. Mosk. Univ., Ser. II, Khim. (1964), 19(4), 75-80
DT Journal
LA Unavailable

L23 ANSWER 69 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1964:418526 CAPLUS
DN 61:18526
OREF 61:3188b-e
TI Preparation of 2',3'-O-alkylidene D-ribonucleosides
PA Ajinomoto Co., Inc.
SO 10 pp.
DT Patent
LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1354426		19640306	FR	
PRAI	JP		19620420		

L23 ANSWER 70 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1962:471290 CAPLUS
DN 57:71290
OREF 57:14218e-f
TI Germination of conidia of Peronospora tabacina. I. Germination in vitro
AU Shepherd, C. J.
CS Div. Plant Ind., C.S.I.R.O., Canberra
SO Australian J. Biol. Sci. (1962), 15, 483-508
DT Journal
LA Unavailable

L23 ANSWER 71 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1962:436589 CAPLUS
DN 57:36589
OREF 57:7365a-i
TI Synthesis of P-N amino acid (peptide) derivatives of adenylic acid and a

study of their properties
AU Andronova, L. G.; Shabarova, Z. A.; Ryabova, T. S.; Prokofev, M. A.
CS State Univ., Moscow
SO Zh. Obshch. Khim. (1961), 31, 3243-50
DT Journal
LA Unavailable

L23 ANSWER 72 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1962:429818 CAPLUS
DN 57:29818
OREF 57:6004f-i,6005a-d,6006a-c
TI The hydrolysis of sulfonium nucleosides and glycosides by alkali
AU Baddiley, J.; Frank, W.; Hughes, N. A.; Wieczorkowski, J.
CS Univ. Durham, Newcastle-Upon-Tyne, UK
SO J. Chem. Soc. (1962) 1999
DT Journal
LA Unavailable

L23 ANSWER 73 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1961:93506 CAPLUS
DN 55:93506
OREF 55:17640c-f
TI Synthesis of nucleotide coenzymes and related compounds
AU Shabarova, Z. A.; Ryabova, T, S.; Prokof'ev, M. A.
CS M. V. Lomonosov State Univ., Moscow
SO Doklady Akad. Nauk S.S.S.R. (1961), 136, 1116-19
DT Journal
LA Unavailable

L23 ANSWER 74 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1959:67725 CAPLUS
DN 53:67725
OREF 53:12290b-e
TI Analogs of nucleotides. III. Syntheses in the series of **adenosine** phosphonate derivatives
AU Wolff, Manfred E.; Burger, Alfred
CS Univ. of Virginia, Charlottesville
SO J. Am. Pharm. Assoc. (1959), 48, 56-9
DT Journal
LA Unavailable

L23 ANSWER 75 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1950:7406 CAPLUS
DN 44:7406
OREF 44:1420d-h
TI Synthesis of purine nucleosides. XXIII. A new synthesis of **adenosine**
AU Kenner, G. W.; Taylor, C. W.; Todd, A. R.
CS Univ. Chem. Lab., Cambridge, UK
SO J. Chem. Soc. (1949) 1620-4
DT Journal
LA Unavailable

L23 ANSWER 76 OF 76 CAPLUS COPYRIGHT 2002 ACS
AN 1936:730 CAPLUS
DN 30:730
OREF 30:105a-e
TI Partial synthesis of **ribose** nucleotides. II. Muscle inosinic acid
AU Levene, P. A.; Tipson, R. Stuart

SO J. Biol. Chem. (1935), 111, 313-23
DT Journal
LA Unavailable

=> d l23 abs ibib 1,6,7,13,15,19,20,34,37,41,52,53,54,69,75

L23 ANSWER 1 OF 76 MEDLINE
AB The synthesis of cyclic ADP-carbocyclic-**ribose** (2), as a stable mimic for cyclic ADP-**ribose**, was investigated. Construction of the 18-membered backbone structure was successfully achieved by condensation of the two phosphate groups of 19, possibly due to restriction of the conformation of the substrate in a syn-form using an 8-chloro substituent at the adenine moiety. SN2 reactions between an optically active carbocyclic unit 8, which was constructed by a previously developed method, and 8-bromo-N6-trichloroacetyl-2',3'-O-**isopropylideneadenosine** 9c gave N-1-carbocyclic derivative, which was deprotected to give 5'-5"-diol derivatives 18. When 18 was treated with POCl3 in PO(OEt)3, the bromo group at the 8-position was replaced to give N-1-carbocyclic-8-chloroadenosine 5',5"-diphosphate derivative 19 in 43% yield. Treatment of 19 with 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride gave the desired intramolecular condensation product 20 in 10% yield. This is the first chemical construction of the 18-membered backbone structure containing an intramolecular pyrophosphate linkage of a cADPR-related compound with an adenine base.
ACCESSION NUMBER: 2000232693 MEDLINE
DOCUMENT NUMBER: 20232693 PubMed ID: 10772708
TITLE: Nucleosides and nucleotides. 192. Toward the total synthesis of cyclic ADP-carbocyclic-**ribose**. Formation of the intramolecular pyrophosphate linkage by a conformation-restriction strategy in a syn-form using a halogen substitution at the 8-position of the adenine ring.
AUTHOR: Sumita Y; Shirato M; Ueno Y; Matsuda A; Shuto S
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, Japan.
SOURCE: NUCLEOSIDES, NUCLEOTIDES & NUCLEIC ACIDS, (2000 Jan-Feb) 19
(1-2) 175-87.
Journal code: 100892832. ISSN: 1525-7770.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000811
Last Updated on STN: 20000811
Entered Medline: 20000731

L23 ANSWER 6 OF 76 MEDLINE
AB With the use of PMR the **ribose** conformations have been studies in the temperature range -60 to +40 degrees C in ND3 solutions of **adenosine** (A), guanosine (G), inosine (I), xanthsine (X), purineriboside (PR), 2-aminopurineriboside (2amPR), N6-isopentenyladenosine (N6ipA), 8-bromoadenosine (iA), and **isopropylideneguanosine** (iG). The aanlysis is based on the two-state S in equilibrium N model of the **ribose** moiety proposed by Altona and Sundaralingam. The compounds studied can be classified into

two groups: 1. A, I, G, X, PR, 2amPR, N6ipA, and T show a small temperature dependence of thnd F have a stronger temperature dependence and [S] approximately 0.8. Within these two groups the similarities observed are greater than observed in the solid state. Some thermodynamic conclusions about the S in equilibrium N and the syn in equilibrium anti equilibria are presented. The results support the previously proposed correlation of the S state of the **ribose** with the syn conformation of the base and of the N state of the **ribose** with the anti conformation of the base. Furthermore, it is derived that the gg rotamer is correlated with the S state of the **ribose** and therefore stabilizes the syn conformation of the base.

ACCESSION NUMBER: 76015163 MEDLINE
DOCUMENT NUMBER: 76015163 PubMed ID: 125961
TITLE: **Ribose** conformations in the common purine(beta)ribosides, in some antibiotic nucleosides, and in some **isopropylidene** derivatives: a comparison.
AUTHOR: Westhof E; Roder O; Croneiss I; Ludemann H D
SOURCE: ZEITSCHRIFT FUR NATURFORSCHUNG. SECTION C. BIOSCIENCES, (1975 Mar-Apr) 30 (2) 131-40.
Journal code: 7801143. ISSN: 0341-0382.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197511
ENTRY DATE: Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19751122

L23 ANSWER 7 OF 76 MEDLINE
ACCESSION NUMBER: 72153724 MEDLINE
DOCUMENT NUMBER: 72153724 PubMed ID: 5016330
TITLE: Synthesis of 2',3'-O-**isopropylidene** -5'-keto-8,5'-cycloadenosine, a novel cyclonucleoside.
AUTHOR: Harper P J; Hampton A
SOURCE: JOURNAL OF ORGANIC CHEMISTRY, (1972 Mar 10) 37 (5) 795-7.

Journal code: 2985193R. ISSN: 0022-3263.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197206
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19720613

L23 ANSWER 13 OF 76 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Two **adenosine** molecules are connected via their **ribose** moieties by transacetalation with 2,2,5,5-tetraethoxyhexane, yielding diastereoisometric bis(**isopropylidene adenosine**) compounds with S,S- (1a) or R, S-configurated (1b) acetal carbons. The S,S isomer shows high hypochromicity and a pronounced positive Cotton effect, which implies strong stacking interactions. The stacking of 1b is less pronounced. Both isomers are substrates for mammalian [calf intestine] **adenosine** deaminase. Whereas compound 1a is slowly deaminated due to steric hindrance and stacking interactions, the diastereoisomer 1b is a much better substrate for the enzyme. Because of the difference in

configuration in 1b the **adenosine** moieties are processed stepwise. Moreover, isomer 1b is a strong competitive inhibitor for the deamination of **adenosine** by the enzyme.

ACCESSION NUMBER: 1982:278955 BIOSIS
DOCUMENT NUMBER: BA74:51435
TITLE: BIS **ISOPROPYLIDENE ADENOSINE** A NOVEL BASE STACKED DI NUCLEOSIDE WITH 2 DEAMINATION SITES FOR **ADENOSINE** DEAMINASE EC-3.5.4.4.
AUTHOR(S): SEELA F; OTT J
CORPORATE SOURCE: UNIV. OF PODERBORN, FACHBEREICH NATURWISSENSCHAFTEN II-LABOR FUER BIOORGANISCHE CHEMIE, WARBURGER STRASSE 100, D-4790 PADERBORN, FRG.
SOURCE: BIOORG CHEM, (1982) 11 (1), 24-31.
CODEN: BOCMBM. ISSN: 0045-2068.
FILE SEGMENT: BA; OLD
LANGUAGE: English

L23 ANSWER 15 OF 76 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB 2',3'-O-**Isopropylideneadenosine** is a nucleoside in which the ribofuranose group is cyclized at the O(2') and O(3') atoms. IPLA crystallizes in the orthorhombic space group P212121 with cell constants a = 20.957 (8), b = 17.134 (7), c = 7.940 (3) .ANG.. There are 2 independent molecules in the asymmetric unit. The intensities of 2663 independent reflections were measured on a Picker FACS-I diffractometer. The structure was solved by direct methods and refined by full-matrix least-squares techniques to a conventional R of 0.063. There are substantial differences in conformation between the 2 independent molecules. The ribofuranose ring of molecule A is essentially planar and the dioxolane ring assumes the C(6')endo, O(2')exo pucker. The conformation about the C(4')-C(5') bond is gauche+ (.PSI. = 53.6.degree.). In contrast, the ribofuranose group of molecule B exhibits the unusual 3T4 twist while the dioxolane ring is puckered in the C(3') endo, O(3') exo mode. The conformation about the C(4')-C(5) bond is trans (.PSI. = 174.5.degree.). Both nucleosides are observed in the anti glycosyl conformation, .chi. = 10.5 and 15.9.degree. in molecules A and B, respectively. The molecular packing is dominated by the self-pairing of the adenine bases which forms a H-bonding network in the ac plane involving the atoms N(1), N(6) and N(7) of the adenine rings.
The bases of molecules A and B are partially overlapped and there are close contacts between the ribose ring **O** of molecule B and the imidazole moiety of the screw-related molecule A.

ACCESSION NUMBER: 1979:146260 BIOSIS
DOCUMENT NUMBER: BA67:26260
TITLE: THE CRYSTAL STRUCTURE AND CONFORMATION OF 2 3-O **ISOPROPYLIDENE ADENOSINE** THE COEXISTENCE OF A PLANAR AND A PUCKERED RIBO FURANOSE RING.
AUTHOR(S): SPRANG S; ROHRER D C; SUNDARALINGAM M
CORPORATE SOURCE: DEP. BIOCHEM., COLL. AGRIC. LIFE SCI., UNIV. WIS., MADISON, WIS. 53706, USA.
SOURCE: ACTA CRYSTALLOGR SECT B STRUCT CRYSTALLOGR CRYST CHEM, (1978) 34 (9), 2803-2810.
CODEN: ACBCAR. ISSN: 0567-7408.
FILE SEGMENT: BA; OLD

LANGUAGE: English

L23 ANSWER 19 OF 76 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1975:199654 BIOSIS
DOCUMENT NUMBER: BA60:29650
TITLE: **RIBOSE** CONFORMATIONS IN THE COMMON PURINE BETA RIBOSIDES IN SOME ANTIBIOTIC NUCLEOSIDES AND IN SOME **ISOPROPYLIDENE** DERIVATIVES A COMPARISON.
AUTHOR(S): WESTHOF E; ROEDER O; CRONEISS I; LUEDEMANN H-D
SOURCE: Z NATURFORSCH SECT C BIOSCI, (1975) 30 (2), 131-140. CODEN: ZNFCAP. ISSN: 0341-0471.
FILE SEGMENT: BA; OLD
LANGUAGE: Unavailable

L23 ANSWER 20 OF 76 CAPLUS COPYRIGHT 2002 ACS
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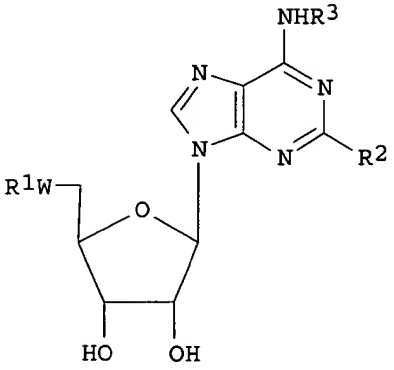

I

AB The present invention concerns novel C2,5'-disubstituted and N6',C2,5'-trisubstituted **adenosine** derivs. I wherein, W represents an oxygen or sulfur atom; R1 represents a lower alkyl or lower cycloalkyl; R2 represents a halogen, lower alkenyl, lower alkynyl or lower alkylidenehydrazino; R3 represents lower alkyl, lower cycloalkyl, (ar)alkyl, aryl or anilide; said cycloalkyl aryl and (ar)alkyl may be substituted with one or more substituent selected from halogen, hydroxy, hydroxyalkyl; or a salt of said compd. and their different uses. These **adenosine** derivs. were found to be potent **adenosine** receptor agonists and thus are of a therapeutic value in the treatment and prophylaxis of diseases and disorders affected by **adenosine** receptor agonists. Thus, 5'-deoxy--2-iodo-5'-ethylthioadenosine was prepd. and tested in vivo as human **adenosine** receptor agonist. The ability of title compds. to either stimulate cAMP prodn. through human **adenosine** A2A receptors expressed in CHO cells or inhibit the cAMP prodn. in human **adenosine** A3 receptors expressed in HEK 293 cells was assessed.
ACCESSION NUMBER: 2002:695993 CAPLUS
DOCUMENT NUMBER: 137:217179
TITLE: Preparation of C2,5'-disubstituted and N6,C2,5'-tri-substituted nucleosides as

adenosine receptor agonists
INVENTOR(S): Van Tilburg, Erica; Ijzerman, Ad
PATENT ASSIGNEE(S): Universiteit Leiden, Neth.; Can-Fite Biopharma Ltd.
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002070532	A2	20020912	WO 2002-IL160	20020303
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2372742	A1	20020904	GB 2001-5337	20010303

PRIORITY APPLN. INFO.: GB 2001-5337 A 20010303
OTHER SOURCE(S): MARPAT 137:217179

L23 ANSWER 34 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB NMR data confirms that for 2',3'-O-**isopropylidene** derivs. of **adenosine** 5'-carboxylic acid the most probable conformation is C4'-endo, O4'-exo, and C1'-endo. Compds. of this series are characterized principally by a syn-conformation of the heterocycle around the N-glycosidic bond relative to the **ribose** fragment of the mols. CD data confirmed that conformations are stabilized by a spatial convergence of the N3 heterocyclic atom and the carboxyl group.
ACCESSION NUMBER: 1989:24223 CAPLUS
DOCUMENT NUMBER: 110:24223
TITLE: Conformational analysis of 8-substituted **isopropylidene** derivatives of **adenosine**-5'-carboxylic acid
AUTHOR(S): Timoshchuk, V. A.; Ermolenko, T. M.; Akhrem, A. A.
CORPORATE SOURCE: Beloruss. Inst. Epidemiol. Mikrobiol., Minsk, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1988), 24(6), 1214-20
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

L23 ANSWER 37 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB In rat liver homogenates 2',3'-O-**isopropylideneadenosine** was deaminated to 2',3'-O-**isopropylideneinosine**. **Adenosine** was deaminated to a greater extent and rate. **Adenosine** was metabolized to hypoxanthene and **ribose** 1-phosphate, whereas the **isopropylidene** group was not split from **isopropylideneinosine**.
ACCESSION NUMBER: 1986:439931 CAPLUS
DOCUMENT NUMBER: 105:39931
TITLE: Comparative study of 2',3'-O-**isopropylideneadenosine** and **adenosine** transformations in rat liver homogenates

AUTHOR(S): Golovatskii, I. D.; Petlichnaya, L. I.
CORPORATE SOURCE: A. V. Palladin Inst. Biochem., Lvov, USSR
SOURCE: Ukrainskii Biokhimicheskii Zhurnal (1978-1999) (1986),
58(3), 37-40
CODEN: UBZHD4; ISSN: 0201-8470
DOCUMENT TYPE: Journal
LANGUAGE: Russian

L23 ANSWER 41 OF 76 CAPLUS COPYRIGHT 2002 ACS
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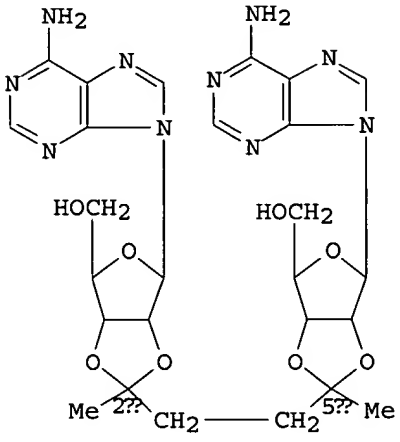

I, 2"-S, 5"-S
II, 2"-R, 5"-S

AB Two **adenosine** mols. were connected via their **ribose** moieties by transacetalation with 2,2,5,5-tetraethoxyhexane, yielding diastereoisomeric bis(**isopropylideneadenosine**) compds. with S,S-(I) or R,S- (II) acetal carbons. I shows high hypochromicity and a pronounced pos. Cotton effect, which implies strong stacking interactions.
The stacking of II is less pronounced. Both isomers are substrates from mammalian **adenosine** deaminase (EC 3.5.4.4). Whereas I is slowly deaminated due to steric hindrance and stacking interactions, I is a much better substrate for the enzyme. Because of the difference in configuration in II the **adenosine** moieties are processed stepwise. Moreover, II is a strong competitive inhibitor for the deamination of **adenosine** by the enzyme.
ACCESSION NUMBER: 1982:424149 CAPLUS
DOCUMENT NUMBER: 97:24149
TITLE: Bis(**isopropylidene adenosine**) - a novel base-stacked dinucleoside with two deamination sites for **adenosine** deaminase
AUTHOR(S): Seela, Frank; Ott, Johann
CORPORATE SOURCE: Fachber. Naturwiss., Univ. Paderborn, Paderborn, D-4790, Fed. Rep. Ger.
SOURCE: Bioorg. Chem. (1982), 11(1), 24-31
CODEN: BOCMBM; ISSN: 0045-2068
DOCUMENT TYPE: Journal
LANGUAGE: English

L23 ANSWER 52 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB **Ribose** conformations were studied at -60 to +40.degree. in ND3

solns. of **adenosine**, guanosine, inosine, xanthosine, purineriboside, 2-aminopurineriboside, N6-isopentenyladenosine, 8-bromoadenosine, 8-bromoguanosine, formycin B, tubercidin, **isopropylideneadenosine**, and **isopropylideneguanosine** with PMR based on the two-state model which was correlated with the syn and anti conformations of the base.

ACCESSION NUMBER: 1975:156612 CAPLUS
DOCUMENT NUMBER: 82:156612
TITLE: **Ribose** conformations in the common purine(.beta.)ribosides, in some antibiotic nucleosides, and in some **isopropylidene** derivatives. Comparison
AUTHOR(S): Westhof, Eric; Roeder, Oskar; Croneiss, Ingrid; Luedemann, Hans D.
CORPORATE SOURCE: Inst. Biophys Phys. Biochem., Univ. Regensburg, Regensburg, Ger.
SOURCE: Z. Naturforsch., Teil C (1975), 30c(3-4), 131-40 CODEN: ZNFCAP
DOCUMENT TYPE: Journal
LANGUAGE: English

L23 ANSWER 53 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB Proton T1 measurement with the Fourier transform method combined with quenching of dipolar coupling through selective D substitution was used to elucidate intra- and intermol. interactions in soln., of 2',3'-O-**isopropylideneadenosine**. Av. distances between H-8 and **ribose** protons were detd. in combination with carbon-13 T1 measurement. The method is compared with the nuclear Overhauser effect.

ACCESSION NUMBER: 1973:546787 CAPLUS
DOCUMENT NUMBER: 79:146787
TITLE: Deuterium substitution effect on proton relaxation times as a direct means for elucidating molecular interaction in solution. Application to 2',3'-**isopropylideneadenosine**
AUTHOR(S): Akasaka, Kazuyuki; Imoto, Toshiaki; Hatano, Hiroyuki
CORPORATE SOURCE: Fac. Sci., Kyoto Univ., Kyoto, Japan
SOURCE: Chem. Phys. Lett. (1973), 21(2), 398-400 CODEN: CHPLBC
DOCUMENT TYPE: Journal
LANGUAGE: English

L23 ANSWER 54 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB The conformations of both diastereoisomers of 2',3'-O-benzylideneuridine, 2',3'-O-[4-[N-(2-chloroethyl)-N-methylamino]benzylidene]uridine, and 2',3'-O-[4-[N-(2-chloroethyl)-N-methylamino]benzylidene]**adenosine** were studied in comparison with the conformations of 2',3'-O-**isopropylideneuridine**, (I) 2',3'-O-**isopropylideneadenosine** (II), uridine, and **adenosine** by PMR. The Ph group at C-2 of the dioxolane ring in each diastereoisomeric benzylidene nucleoside occupied the axial position. CD spectra showed that this was due to electrostatic interaction with the heterocyclic base residue. The conformation of the **ribose** moiety of the benzylidene nucleosides differed from that of the **isopropylidene** analogs. The Cs-conformation of **ribose** was characteristic of trans-benzylideneuridines and of I and II.

ACCESSION NUMBER: 1973:537428 CAPLUS
DOCUMENT NUMBER: 79:137428
TITLE: Conformation of substituted benzylidene and **isopropylidene** nucleosides

AUTHOR(S): Belikova, A. M.; Grineva, N. I.; Kabashea, G. N.
CORPORATE SOURCE: Inst. Org. Chem., Novosibirsk, USSR
SOURCE: Tetrahedron (1973), 29(15), 2277-83
CODEN: TETRAB
DOCUMENT TYPE: Journal
LANGUAGE: English

L23 ANSWER 69 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB Title compds. are prepd. from D-ribonucleosides (I) and ketones in the presence of POCl3 catalyst, which makes possible the reaction even in the presence of H2O. The I:POCl3 ratio is from 1:1.5 to 1:7, the H2O:POCl3 ratio is from 0.5:1 to 3:1. Thus, 2 g. guanosine (II) is dissolved with stirring in 120 cc. Me2CO contg. 4.1 g. POCl3, kept 3 hrs., and poured slowly in 500 cc. iced H2O, the soln. adjusted to pH 8 with 10N Na2CO3 and concd., the Me2CO removed, pH adjusted to 6 using HCl, the mixt. filtered, and the residue recrystd to yield 70% 2',3'-O-**isopropylideneguanosine** (III). Better yield is obtained as follows: 2 g. II is dissolved in small portions with stirring at 30.degree. in 80 g. Me2CO contg. 1.% H2O and 4 g. POCl3, the mixt. stirred 1 hr., pH adjusted to 9 with 2.5N Na2CO3, the mixt. filtered, the residue washed with 50% Me2CO, the filtrate and the washed Me2CO united, and the mixt. concd. in vacuo, cooled, adjusted to pH 6.8 with 2N HCl, and filtered. The residue is washed with H2O and dried to obtain III, m. 300.degree., yield 95%. Similarly, 2',3'-O-**isopropylidenes** (% yield and m.p. given): with **adenosine** (99, 216.degree.); cytidine (98, 224.degree.); uridine (99, 161.degree.), are prepd. Similarly prepd. are 2',3'-O-isobutylideneinosine (85% yield, m. 274-7.degree.), and **adenosine**, II, cytidine and uridine 2',3'-O-isobutylidenes with 90, 57, 93, and 99%, resp. yields; and 2'-3-O-cyclohexylideneinosine (88% yield, m. 283-6.degree.).
ACCESSION NUMBER: 1964:418526 CAPLUS
DOCUMENT NUMBER: 61:18526
ORIGINAL REFERENCE NO.: 61:3188b-e
TITLE: Preparation of 2',3'-O-alkylidene D-ribonucleosides
PATENT ASSIGNEE(S): Ajinomoto Co., Inc.
SOURCE: 10 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1354426		19640306	FR	
PRIORITY APPLN. INFO.:			JP	19620420

L23 ANSWER 75 OF 76 CAPLUS COPYRIGHT 2002 ACS
AB Me 2,3-**isopropylidene**-D-ribofuranoside (I) (5 g.) in 50 cc. xylene, treated with 20 g. KOH and 4 g. PhCH2Cl and stirred 4 hrs. at 80.degree., gives 6 g. of the 5-benzyl deriv. (II), b. 95-100.degree./10-4 (bath), [.alpha.]D17 -36 .+-. 2.degree. (CHCl3, c 1.3); 2 g. I in 1 cc. ether, added to 60 cc. liquid NH3 and treated with 0.25 g. Na and then with 1.7 cc. PhCH2Cl, gives 1.6 g. II. II (2.3 g.) and 50 cc. 0.05 N 50% aq. EtOH-HCl, refluxed 3 hrs., give 1.6 g. 5-benzyl-D-ribofuranose (III), pale yellow sirup, [.alpha.]D18 -8.5.degree. (EtOH, c 1.5). III (3.8 g.) in 0.25 cc. dioxane and 5 cc. concd. HCl (d. 1.19) at 0.degree., treated with 3 cc. EtSH and the crude sirup (3 g.) acetylated in C5H5N, gives 1.3

g. 2,3,4-triacetyl-5-benzyl-D-**ribose** di-Et mercaptal (IV), b. 170-80.degree./10-4 mm. (bath), [.alpha.]D18 9.degree. (CHCl3, c 0.87); decompn. of 3.7 g. with 8 g. yellow HgO and 9 g. HgCl2 in Me2CO gives 2.6 g. 2,3,4-triacetyl-5-benzyl-D-**ribose** (V), b. 150.degree./10-2 mm. (bath), [.alpha.]D17 -4.2.degree. (CHCl3, c 0.65). NH4Cl (0.3 g.), 11.4 g. 4,6-diamino-2-(methylmercapto)pyrimidine, and 6.6 g. V in 270 cc. abs. EtOH, kept 24 hrs. at room temp., the yellow glass (8.8 g.) deacetylated (2 days) with MeOHNH3 (satd. at 0.degree.), 4.3 g. of the sirup in 100 cc. C5H5N added to neutralized 2,5-Cl2C6H3N2Cl, and the azo compd. acetylated and chromatographed on Al2O3, give 6-amino-4-(2,3-diacetyl-5-benzyl-D-ribofuranosidamino)-5-(2,5-dichlorophenylazo)-2-(methylmercapto)pyrimidine (VI), an orange-yellow powder, m. about 90.degree., [.alpha.]D16 660 .+-. 60.degree. (CHCl3, c 0.048); reduction of VI with Zn and AcOH in AcOEt, reaction with HCS2H, cyclization with MeONa, acetylation, and boiling 2 hrs. with Raney Ni, give **adenosine** (as the picrate).

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